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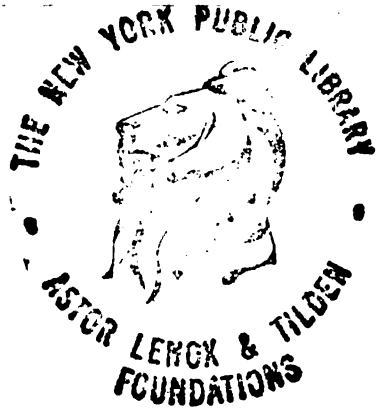

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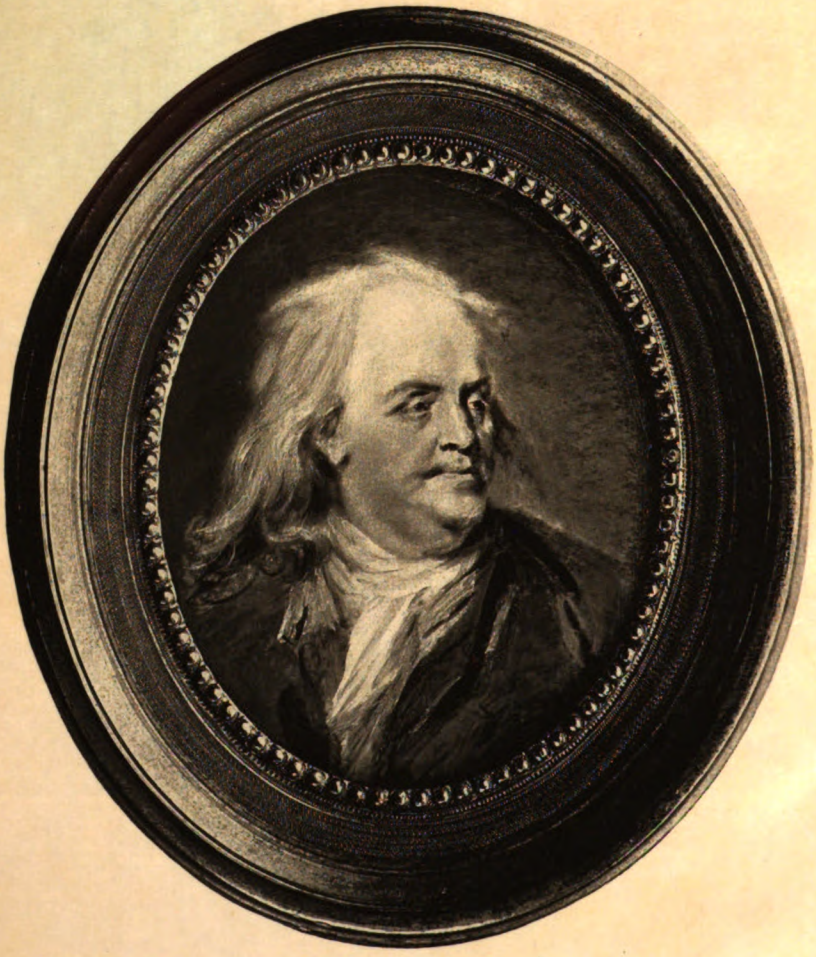

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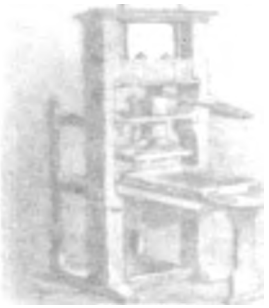

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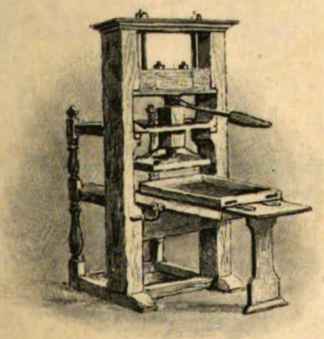

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CVII

TO WILLIAM SMITH

PHILADELPHIA, 27 November, 1753.

DEAR SIR:—Having written to you fully, via Bristol, I have now little to add. Matters relating to the Academy remain *in statu quo*. The trustees would be glad to see a rector established there, but they dread entering into new engagements till they are got out of debt; and I have not yet got them wholly over to my opinion, that a good professor or teacher of the higher branches of learning would draw so many scholars as to pay great part, if not the whole, of his salary. Thus, unless the Proprietors of the province shall think fit to put the finishing hand to our institution, it must, I fear, wait some few years longer before it can arrive at that state of perfection which to me it seems now capable of; and all the pleasure I promised myself in seeing you

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settled among us vanishes into smoke. But good Mr. Collinson writes me word that no endeavours of his shall be wanting; and he hopes, with the Archbishop's assistance, to be able to prevail with our Proprietors.[1] I pray God grant them success. My son presents his affectionate regards, with, dear Sir, yours, &c.,

B. FRANKLIN.

CVIII

TO CADWALLADER COLDEN

PHILADELPHIA, 6 December, 1753.

DEAR SIR:—I received your favor of the 19th past, with some remarks on my meteorological paper, for which I thank you and return some observations on those remarks, hoping by this friendly intercourse of sentiments and objections some advantage will arise, to the increase of true knowledge.

I sent you our treaty some time since. You will find very little in it; but I have hopes it will introduce a regulation of our Indian trade, by the government taking it in hand and furnishing the Indians with goods at the cheapest rate without aiming at profit, as is done by Massachusetts; by which means I think we must vastly undersell the French, and thereby attach the Indians more firmly to the British interest.

[1] Upon the application of Archbishop Herring and Peter Collinson, at Dr. Franklin's request (aided by the letters of Mr. Allen and Mr. Peters), Thomas Penn subscribed an annual sum, and afterwards gave at least £5,000 to the founding or engrafting the College upon the Academy.—STUBER.

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Mr. Collinson certainly received your answer to Kastner. I think one of his letters to me mentions it.

I send you herewith a copy of my paper on the *Increase of Mankind;* the only one I have, so must request you to return it. That on the *Air*, &c., is what you have already seen. The third mentioned to you by Mr. Collinson concerning the Germans, is scarcely worth sending. It will contain nothing new to you.

I congratulate you on Lord Halifax's approbation of your conduct in public affairs. From such a man the honor is great, and the satisfaction; but the approbation of your own mind is something more valuable in itself, and it is what I doubt not you will always enjoy.

I should like to see Pike's book some time or other, when you can conveniently send it. With great respect and esteem, I am, Sir, &c.,

B. FRANKLIN.

CIX

TO JAMES BOWDOIN

PHILADELPHIA, 13 December, 1753.

DEAR SIR:—I received your favor of the 12th ultimo, with the law of your province for regulating the Indian trade, for which I thank you, and for the remarks that accompany it, which clearly evince the usefulness of the law, and I hope will be sufficient to induce our Assembly to follow your example.

I have yet received no particulars of the unhappy gentleman's death at Petersburg, (whose fate I lament). One of the papers says that all the letters

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from thence confirm the account, and mentions his name (Professor Richmann), but nothing farther. No doubt we shall have a minute account of the accident with all its circumstances, in some of the magazines or the *Transactions of the Royal Society*.[1]

The observation you made of the sea water emitting more and less light in different tracts passed through by your boat is new, and your manner of accounting for it ingenious. It is indeed very possible that an extremely small animalcule, too small to be visible even by the best glasses, may yet give a visible light. I remember to have taken notice, in a drop of kennel water, magnified by the solar microscope to the bigness of a cart-wheel, there were numbers of visible animalcules of various sizes swimming about; but I was sure there were likewise some which I could not see, even with that magnifier, for the wake they made in swimming to and fro was very visible, though the body that made it was not so. Now if I could see the wake of an invisible animalcule, I imagine I might much more easily see its light if it were of the luminous kind. For how small is the extent of a ship's wake, compared with that of the light of her lantern.

My barometer will not show the luminous appearance by agitating the mercury in the dark, but I think yours does. Please to try whether it will, when agitated, attract a fine thread hung near the top of the tube.

[1] Professor Richmann was killed at Petersburg, on the 26th of July, 1753, while repeating Franklin's experiment for bringing electricity from the clouds. He received a shock, which caused instantaneous death.

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As to the answer to Nollet, if I were going on with it, I should be extremely glad of your peeping into it (as you say) now and then, that I might correct it by your advice. The materials in short hints have been long collected and methodized; they only want to be clothed with expression. But soon after my return from New England, I received the enclosed from Monsieur Dalibard, wherein he tells me that he is preparing an answer, not only to the Abbé, but to some others that have wrote against my doctrine, which will be published the beginning of this winter. This, with a good deal of business, and a little natural indolence, has made me neglect finishing my answer till I shall see what is done by him. Perhaps it may then appear unnecessary for me to do any thing farther in it. And will not one's vanity be more gratified in seeing one's adversary confuted by a disciple than even by one's self? I am, however, a little concerned for Dalibard, when I find by his letter that he has been so far imposed on by the Abbé's confident assertion that a charged bottle placed on an *electric per se* loses its electricity, as to attempt to account for it, when the thing is absolutely not fact. I have in answer wrote him my sentiments on that and some other particulars of the Abbé's book, which I hope will get to hand before his answer is published.[1]

I am with the greatest esteem and regard,
Dear Sir, your most obliged humble servant,
B. FRANKLIN.

[1] The Abbé Nollet published in Paris a volume entitled, *Letters sur l'Electricité, dans lesquelles on examine les découvertes qui ont été faites sur cette matière depuis l'Année 1752, et les conséquences que l'on en peut*

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CX

TO PETER COLLINSON

PHILADELPHIA, 18 April, 1754.

SIR:—Since September last, having been abroad on two long journeys and otherwise much engaged, I have made but few observations on the *positive* and *negative* state of electricity in the clouds. But Mr. Kinnersley kept his rod and bells in good order, and has made many.

Once this winter the bells rang a long time during a fall of snow, though no thunder was heard or lightning seen. Sometimes the flashes and cracks of the electric matter between bell and bell were so large and loud as to be heard all over the house; but by all his observations the clouds were constantly in a negative state, till about six weeks ago, when he found them once to change in a few minutes from the negative to the positive. About a fortnight after that he made another observation of the same kind; and last Monday afternoon, the wind blowing hard at southeast and veering round to northeast, with many thick, driving clouds, there were five or six successive changes from negative to positive, and from positive to negative, the bells stopping a minute or two between every change. Besides the methods mentioned in my paper of September last of discover-

tirer. In the first volume were six letters directed to Franklin, designed to confute his doctrines and hypotheses. The Abbé's effort brought into the field several champions of Dr. Franklin, among whom were David Colden, a son of Cadwallader Colden, of New York, and Monsieur Dalibard, of Paris. Franklin decided that the Abbé's letters did not require any reply from him.

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ing the electrical state of the clouds, the following may be used. When your bells are ringing, pass a rubbed tube by the edge of the bell, connected with your pointed rod; if the cloud is then in a negative state, the ringing will stop; if in a positive state, it will continue, and perhaps be quicker. Or suspend a very small cork ball by a fine silk thread, so that it may hang close to the edge of the rod-bell; then, whenever the bell is electrified, whether positively or negatively, the little ball will be repelled and continue at some distance from the bell. Have ready a round-headed glass stopper of a decanter, rub it on your side till it is electrified, then present it to the cork ball. If the electricity in the ball is positive, it will be repelled from the glass stopper, as well as from the bell; if negative, it will fly to the stopper.

B. FRANKLIN.[1]

CXI

TO CADWALLADER COLDEN

PHILADELPHIA, 30 August, 1754.

DEAR SIR:—I have now before me your favors of July 23d, and August 15th. I return Mr. Pike's *Philosophia Sacra*. His manner of philosophizing is much out of my way.

I am now about to proceed on my eastern journey, but hope to be at home in the winter, the best season for electrical experiments, when I will gladly make any you desire. In the mean time I should be glad

[1] Soon after writing this letter Franklin set out on a tour to New England.

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if you would communicate the thoughts you mention, that I may consider them. If you please, direct them to me at Boston.

There must, I think, be some mistake in what you mention, of my having sent to Mr. Collinson the paper you wrote me on water-spouts. I have the original now by me, and cannot recollect that I ever copied it, or that I ever communicated the contents of it to Mr. Collinson or any one. Indeed, I have long had an intention of sending him all I have wrote, and all I have received from others on this curious subject, without mentioning names; but it is not yet done.

Our Assembly were not inclined to show any approbation of the plan of union; yet I suppose they will take no steps to oppose its being established by the government at home. Popular elections have their inconveniences in some cases; but in establishing new forms of government, we cannot always obtain what we may think the best; for the prejudices of those concerned, if they cannot be removed, must be in some degree complied with. However, I am of opinion that when troops are to be raised in America, the officers appointed must be men they know and approve, or the levies will be made with more difficulty, and at much greater expense.[1]

It is not to be expected that a Quaker Assembly will establish any but Quaker schools; nor will they ever agree to a tax for the payment of any clergy.

[1] The author had recently returned from the Convention at Albany, where he had proposed his celebrated *Plan of Union*. This Plan, and Mr. Colden's remarks on some parts of it, may be found in No. CXII.

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It is intended by the Society, that the schoolmasters among the Germans shall teach English.

I am glad the representation is agreeable to your sentiments. The letter to Lord Halifax I suppose your son sends from New York.

Since my return I have received from Italy a book in quarto, entitled *Dell' Elettricismo Artificiale e Naturale, Libri Due, di Giovambattista Beccaria de' CC. RR. delle Scuole Pie*, printed at Turin, and dedicated to the King. The author professedly goes on my principles; he seems a master of method, and has reduced to systematic order the scattered experiments and positions delivered in my paper. At the end of the first book, there is a letter addressed to the Abbé Nollet, in which he answers some of the Abbé's principal objections. This letter being translated into French, I send you the translation for your perusal, and will send you the Italian book itself by some future opportunity, if you desire it. It pleases me the more, in that I find the author has been led by sundry observations and experiments, though different from mine, to the same strange conclusion, viz., *that some thunder-strokes are from the earth upwards;* in which I feared I should for some time have been singular.

With the greatest esteem and regard I am, dear Sir, &c.,

B. FRANKLIN.

P. S.—Please to send me the French piece by the first opportunity, after you have perused it, directed to me at Boston.

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CXII

PLAN OF UNION FOR THE COLONIES

In anticipation of unpleasant complications with France, the Lords of Trade directed commissioners to be appointed in several of the provinces, to assemble at Albany for the specific purpose of conciliating and attaching to them the Six Nations, whose alliance was of vital importance in case of a war with France. The commissioners met on the 19th of June, 1754. The colonies of New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, and Maryland were represented by twenty-five commissioners or delegates. Franklin was the commissioner from Pennsylvania. Several days were spent in distributing presents and holding "talks" with the Indians. On the 24th of June the journal of the commissioners shows the following record:

"A motion was made that the commissioners deliver their opinion whether a union of all the colonies is not at present absolutely necessary for their security and defence. The question was accordingly put, and passed in the affirmative *unanimously*.

"On a motion made, that a committee be appointed to prepare and receive plans or schemes for the union of the colonies, and to digest them into one general plan for the inspection of this Board; Resolved, that each government choose one of their own number to be of that committee. Accordingly were appointed Thomas Hutchinson for Massachusetts, Theodore Atkinson for New Hampshire, William Pitkin for Connecticut, Stephen Hopkins for Rhode Island, William Smith for New York, Benjamin Franklin for Pennsylvania, and Benjamin Tasker for Maryland."

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It is a significant and curious fact that, with the exception of those from Massachusetts, none of the delegates had any instructions to discuss the question of a union of the colonies for mutual defence, or for any other purpose. Their instructions restricted them to the concerting of measures best calculated to secure the friendship of the Six Nations, and to resist the encroachment of the French and their allies. The Massachusetts commissioners were authorized to "enter into articles of union and confederation for the general defence of his Majesty's subjects and interests in North America, *as well in time of peace as of war*." Though not within the instructions of the commissioners, there are abundant reasons for believing that some plan of union was the subject of much more thought and discussion than the friendship of the Indians, a subject, however, which was not neglected. It certainly had been the uppermost thought in Franklin's mind for some time. The *Pennsylvania Gazette* for May 9th, 1754, contains an account, evidently from his pen, of the capture by the French of Captain Trent's party, who were erecting a fort (afterwards Fort Duquesne) at the fork of the Ohio. After narrating the particulars, and urging union to resist aggression, he adds: "The confidence of the French in this undertaking seems well grounded in the present disunited state of the British colonies, and the extreme difficulty of bringing so many different governments and assemblies to agree in any speedy and effectual measures for our common defence and security; while our enemies have the very great advantage of being under one direction, with one council, and one purse." At the end of the article is a woodcut, in which is the figure of a snake, separated into parts, to each of which is affixed the initial of one of the colonies, and at the bottom in large capital letters the motto, JOIN OR DIE. It is not surprising, therefore, that when Franklin arrived at Albany,

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he had in his pocket a "plan of union" which he had submitted to several influential friends in New York, and which received their approval. Several other plans were submitted to the committee, but his was approved of, and reported to the commissioners. Its various features were under discussion twelve days, and finally adopted, subject to the confirmation of Parliament, which was judged necessary to give such a union validity. Though the commissioners were nearly or quite unanimous in approving Franklin's plan of union—Trumbull says the Connecticut delegates did not approve of it, though they did approve of the union,—it met with a very different reception from the colonial assemblies to whom it was submitted, while in England, it proved so unacceptable that the Board of Trade did not even recommend it to the notice of the king. Franklin says: "The Assemblies all thought there was too much *prerogative* in it, and in England it was thought to have too much of the *democratic*." The home government had doubtless much the same reasons for discouraging such a union as the Roman emperors had for refusing to allow the servile population to be put in uniform; they did not care to give them such facilities for learning their own strength.

Short Hints towards a Scheme for Uniting the Northern Colonies

A GOVERNOR-GENERAL

To be appointed by the King.

To be a military man.

To have a salary from the crown.

To have a negation on all acts of the Grand Council, and carry into execution whatever is agreed on by him and that Council.

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GRAND COUNCIL

One member to be chosen by the Assembly of each of the smaller colonies, and two or more by each of the larger, in proportion to the sums they pay yearly into the general treasury.

MEMBERS' PAY

—— shillings sterling per diem, during their sitting, and mileage for travelling expenses.

PLACE AND TIME OF MEETING

To meet —— times in every year, at the capital of each colony, in course, unless particular circumstances and emergencies require more frequent meetings and alteration in the course of places. The governor-general to judge of those circumstances, &c., and call by his writs.

GENERAL TREASURY

Its fund, an excise on strong liquors, pretty equally drunk in the colonies, or duty on liquor imported, or —— shillings on each license of a public house, or excise on superfluities, &c., &c. All which would pay in some proportion to the present wealth of each colony, and increase as that wealth increases, and prevent disputes about the inequality of quotas. To be collected in each colony and lodged in their treasury, to be ready for the payment of orders issuing from the governor-general and Grand Council jointly.

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DUTY AND POWER OF THE GOVERNOR-GENERAL AND GRAND COUNCIL

To order all Indian treaties. Make all Indian purchases not within proprietary grants. Make and support new settlements by building forts, raising and paying soldiers to garrison the forts, defend the frontiers, and annoy the enemy. Equip guard-vessels to scour the coasts from privateers in time of war, and protect the trade, and every thing that shall be found necessary for the defence and support of the colonies in general, and increasing and extending their settlements, &c.

For the expense, they may draw on the fund in the treasury of any colony.

MANNER OF FORMING THIS UNION

The scheme being first well considered, corrected, and improved by the commissioners at Albany, to be sent home, and an act of Parliament obtained for establishing it.[1]

[1] This paper was communicated to James Alexander, with the following note:

New York, June 8, 1754.

"Mr. Alexander is requested to peruse these *Hints*, and make remarks in correcting or improving the scheme, and send the paper, with such remarks, to Dr. Colden for his sentiments, who is desired to forward the whole to Albany, to their very humble servant,

"B. Franklin."

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Letter from James Alexander to Cadwallader Colden, Respecting the Above Hints

NEW YORK, [June] 9, 1754.

DEAR SIR:

I had some conversation with Mr. Franklin and Mr. Peters [1] as to the uniting the colonies, and the difficulties thereof, by effecting our liberties on the one hand, or being ineffectual on the other. Whereon Mr. Franklin promised to set down some hints of a scheme that he thought might do, which accordingly he sent to me to be transmitted to you, and it is enclosed.

To me it seems extremely well digested, and at first sight avoids many difficulties that had occurred to me.

Some difficulties still remain. For example, there cannot be found men tolerably well skilled in warlike affairs to be chosen for the Grand Council, and there is danger in communicating to them the schemes to be put in execution, for fear of a discovery to the enemy.

Whether this may not be in some measure remedied by a council of state of a few persons to be chosen by the Grand Council at their stated meetings, which council of state to be always attending the governor-general, and with him to digest beforehand all matters to be laid before the next Grand Council, and only the general, but not the particular, plans of operation.

That the governor-general and that council of state issue orders for the payment of moneys, so far as the Grand Council have beforehand agreed may be issued for any general plan to be executed. That the governor-general and council of state, at every meeting of the Grand Council, lay before them their accounts and transactions since the last meeting; at least so much of their

[1] Mr. Peters was one of the delegates to the Albany Convention from Pennsylvania.

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transactions as is safe to be made public. This council of state to be something like that of the United Provinces, and the Grand Council to resemble the States-General.

That the capacity and ability of the persons to be chosen of the council of state and Grand Council be their only qualifications, whether members of the respective bodies that choose them or not. That the Grand Council, with the governor-general, have power to increase, but not to decrease, the duties laid by act of Parliament, and have power to issue bills of credit on emergencies, to be sunk by the increased funds, bearing a small interest, but not to be tenders. I am, dear Sir,

Your most obedient,
and most humble servant,
JAMES ALEXANDER.

Remarks on the Hints for a Scheme of Union, by Cadwallader Colden

GOVERNOR-GENERAL

It seems agreed on all hands that something is necessary to be done for uniting the colonies in their mutual defence, and it seems to be likewise agreed that it can only be done effectually by act of Parliament. For this reason I suppose that the necessary funds for carrying it into execution, in pursuance of the ends proposed by it, cannot be otherwise obtained. If it were thought that the Assemblies of the several colonies may agree to lay the same duties and apply them to the general defence and security of all the colonies, no need of an act of Parliament.

Quære: Which best for the colonies; by Parliament, or by the several Assemblies?

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The King's ministers, so long since as the year 1723 or 1724, had thoughts of sending over a governor-general of all the colonies, and the Earl of Stair was proposed as a fit person. It is probable, the want of a suitable support of the dignity of that office prevented that scheme's being carried into execution, and that the ministry and people of England think that this charge ought to be borne by the colonies.

GRAND COUNCIL

Quære: Is the Grand Council, with the governor-general, to have a legislative authority? If only an executive power, objections may be made to their being elective. It would be in a great measure a change of the constitution, to which I suspect the crown will not consent. We see the inconveniences attending the present constitution, and remedies may be found without changing it, but we cannot foresee what may be the consequences of a change in it. If the Grand Council be elected for a short time, steady measures cannot be pursued. If elected for a long time, and not removable by the crown, they may become dangerous. Are they to have a negative on the acts of the governor-general? It is to be considered that England will keep their colonies, so far as they can, dependent on them; and this view is to be preserved in all schemes to which the King's consent is necessary.

PLACE AND TIME OF MEETING

It may be thought dangerous to have fixed meetings of the Grand Council, and in all the colonies at certain times and places. It is a privilege which the Parliament has not, nor the Privy Council, and may be thought destructive of the constitution.

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GENERAL TREASURY

Some estimate ought to be made of the produce which may be reasonably expected from the funds proposed to be raised by duties on liquors, &c., to see whether it will be sufficient for the ends proposed. This I think may be done from the custom-houses in the most considerable places for trade in the colonies.

MANNER OF FORMING THE UNION

No doubt any private person may, in the proper manner, make any proposals which he thinks for the public benefit; but, if they are to be made by the commissioners of the several colonies, who now meet at Albany, it may be presumed that they speak the sense of their constituents. What authority have they to do this? I know of none from either the Council or Assembly of New York.

However, these things may be properly talked of in conversation among the commissioners for further information, and in order to induce the several Assemblies to give proper powers to commissioners to meet afterwards for this purpose.

Reasons and Motives on which the Plan of Union was Formed

The commissioners from a number of the northern colonies being met at Albany, and considering the difficulties that have always attended the most necessary general measures for the common defence, or for the annoyance of the enemy, when they were to be carried through the several particular Assemblies of all the colonies: some Assemblies being before at variance with their governors or councils, and

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the several branches of the government not on terms of doing business with each other; others taking the opportunity, when their concurrence is wanted, to push for favorite laws, powers, or points, that they think could not at other times be obtained, and so creating disputes and quarrels; one Assembly waiting to see what another will do, being afraid of doing more than its share, or desirous of doing less, or refusing to do any thing, because its country is not at present so much exposed as others, or because another will reap more immediate advantage;—from one or other of which causes, the Assemblies of six out of seven colonies applied to had granted no assistance to Virginia, when lately invaded by the French, though purposely convened, and the importance of the occasion earnestly urged upon them; —considering, moreover, that one principal encouragement to the French in invading and insulting the British American dominions, was their knowledge of our disunited state, and of our weakness arising from such want of union; and that from hence different colonies were, at different times, extremely harassed, and put to great expense both of blood and treasure, who would have remained in peace, if the enemy had had cause to fear the drawing on themselves the resentment and power of the whole; —the said commissioners, considering also the present encroachments of the French and the mischievous consequences that may be expected from them, if not opposed with our force, came to an unanimous resolution: *That a union of the colonies is absolutely necessary for their preservation.*

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The manner of forming and establishing this union was the next point. When it was considered that the colonies were seldom all in equal danger at the same time, or equally near the danger, or equally sensible of it, that some of them had particular interests to manage, with which a union might interfere, and that they were extremely jealous of each other, it was thought impracticable to obtain a joint agreement of all the colonies to a union, in which the expense and burthen of defending any of them should be divided among them all; and if ever acts of Assembly in all the colonies could be obtained for that purpose, yet as any colony, on the least dissatisfaction, might repeal its own act, and thereby withdraw itself from the union, it would not be a stable one, or such as could be depended on; for if only one colony should, on any disgust, withdraw itself, others might think it unjust and unequal that they, by continuing in the union, should be at the expense of defending a colony which refused to bear its proportional part, and would therefore one after another withdraw, till the whole crumbled into its original parts. Therefore the commissioners came to another previous resolution, *That it was necessary the Union should be established by act of Parliament.*

They then proceeded to sketch out a *Plan of Union*, which they did in a plain and concise manner, just sufficient to show their sentiments of the kind of union that would best suit the circumstances of the colonies, be most agreeable to the people, and most effectually promote his Majesty's service and

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the general interest of the British empire. This was respectfully sent to the Assemblies of the several colonies for their consideration, and to receive such alterations and improvements as they should think fit and necessary; after which it was proposed to be transmitted to England to be perfected, and the establishment of it there humbly solicited.

This was as much as the commissioners could do.

It was proposed by some of the commissioners to form the colonies into two or three distinct unions; but for these reasons that proposal was dropped even by those that made it, viz.:

1. In all cases where the strength of the whole was necessary to be used against the enemy, there would be the same difficulty in degree to bring the several unions to unite together as now the several colonies; and consequently the same delays on our part and advantage to the enemy.

2. Each union would separately be weaker than when joined by the whole, obliged to exert more force, be oppressed by the expense, and the enemy less deterred from attacking it.

3. Where particular colonies have *selfish views*, as New York, with regard to Indian trade and lands; or are less exposed, being covered by others, as New Jersey, Rhode Island, Connecticut, Maryland; or have particular whims and prejudices against war-like measures in general, as Pennsylvania, where the Quakers predominate; such colonies would have more weight in a partial union, and be better able to oppose and obstruct the measures necessary for the

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general good, than where they are swallowed up in the general union.

4. The Indian trade would be better regulated by the union of the whole than by the partial unions. And as Canada is chiefly supported by that trade, if it could be drawn into the hands of the English, as it might be if the Indians were supplied on moderate terms, and by honest traders appointed by and acting for the public; that alone would contribute greatly to the weakening of our enemies.

5. The establishing of new colonies westward on the Ohio and the Lakes,—a matter of considerable importance to the increase of British trade and power, to the breaking that of the French, and to the protection and security of our present colonies, would best be carried on by a joint union.

6. It was also thought that by the frequent meetings together of commissioners or representatives from all the colonies, the circumstances of the whole would be better known, and the good of the whole better provided for; and that the colonies would, by this connexion, learn to consider themselves, not as so many independent states, but as members of the same body; and thence be more ready to afford assistance and support to each other, and to make diversions in favor even of the most distant, and to join cordially in any expedition for the benefit of all against the common enemy.

These were the principal reasons and motives for forming the Plan of Union as it stands. To which may be added this, that as the union of the—[The remainder of this article was lost.]

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Plan of Union Adopted by the Convention at Albany, with the Reasons and Motives for Each Article of the Plan.[1]

It is proposed that humble application be made for an act of Parliament of Great Britain, by virtue of which one general government may be formed in America, including all the said colonies, within and under which government each colony may retain its present constitution, except in the particulars wherein a change may be directed by the said act, as hereafter follows.

PRESIDENT-GENERAL AND GRAND COUNCIL

That the said general government be administered by a President-General, to be appointed and supported by the crown; and a Grand Council, to be chosen by the representatives of the people of the several colonies met in their respective Assemblies.

It was thought that it would be best the President-

[1] The several *Articles*, as originally adopted, are printed in Italic type; the reasons and motives in Roman.

It is to be observed that the union was to extend to the colonies of New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Virginia, North Carolina, and South Carolina (being all the British Colonies at that time in North America, except Georgia and Nova Scotia), "for their mutual defence and security, and for extending the British settlements in North America." Another plan was proposed to the Convention, which included only New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, and New Jersey. This was printed in the volume of the collections of the Massachusetts Historical Society for 1800. It is a rough draft of the above plan, with some unimportant variations. It would seem, by the *Hints* communicated to Mr. Alexander, that Franklin himself did not at first contemplate any thing more than a union of the northern colonies.—SPARKS.

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General should be supported as well as appointed by the crown, that so all disputes between him and the Grand Council concerning his salary might be prevented; as such disputes have been frequently of mischievous consequence in particular colonies, especially in time of public danger. The quit-rents of crown lands in America might in a short time be sufficient for this purpose. The choice of members for the Grand Council is placed in the House of Representatives of each government, in order to give the people a share in this new general government, as the crown has its share by the appointment of the President-General.

But it being proposed by the gentlemen of the council of New York, and some other counsellors among the commissioners, to alter the plan in this particular, and to give the governors and council of the several provinces a share in the choice of the Grand Council, or at least a power of approving and confirming, or of disallowing, the choice made by the house of representatives, it was said:

"That the government or constitution, proposed to be formed by the plan, consists of two branches: a President-General appointed by the crown, and a council chosen by the people, or by the people's representatives, which is the same thing.

"That by a subsequent article, the council chosen by the people can effect nothing without the consent of the President-General appointed by the crown; the crown possesses therefore full one half of the power of this constitution.

"That in the British constitution, the crown is

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supposed to possess but one third, the lords having their share.

"That this constitution seemed rather more favorable for the crown.

"That it is essential to English liberty, that the subject should not be taxed but by his own consent, or the consent of his elected representatives.

"That taxes to be laid and levied by this proposed constitution will be proposed and agreed to by the representatives of the people, if the plan in this particular be preserved;

"But if the proposed alteration should take place, it seemed as if matters may be so managed as that the crown shall finally have the appointment, not only of the President-General, but of a majority of the Grand Council; for seven out of eleven governors and councils are appointed by the crown;

"And so the people in all the colonies would in effect be taxed by their governors.

"It was therefore apprehended that such alterations of the plan would give great dissatisfaction, and that the colonies could not be easy under such a power in governors, and such an infringement of what they take to be English liberty.

"Besides, the giving a share in the choice of the Grand Council would not be equal with respect to all the colonies, as their constitutions differ. In some, both governor and council are appointed by the crown. In others, they are both appointed by the proprietors. In some, the people have a share in the choice of the council; in others, both government and council are wholly chosen by the people. But

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the House of Representatives is everywhere chosen by the people; and, therefore, placing the right of choosing the Grand Council in the representatives is equal with respect to all.

"That the Grand Council is intended to represent all the several houses of representatives of the colonies, as a house of representatives doth the several towns or counties of a colony. Could all the people of a colony be consulted and unite in public measures, a house of representatives would be needless, and could all the Assemblies conveniently consult and unite in general measures, the Grand Council would be unnecessary.

"That a House of Commons or the House of Representatives and the Grand Council are thus alike in their nature and intention. And as it would seem improper that the King or House of Lords should have a power of disallowing or appointing members of the House of Commons; so likewise, that a governor and council appointed by the Crown should have a power of disallowing or appointing members of the Grand Council, who, in this constitution, are to be the representatives of the people.

"If the governors and councils, therefore, were to have a share in the choice of any that are to conduct this general government, it should seem more proper that they choose the President-General. But this being an office of great trust and importance to the nation, it was thought better to be filled by the immediate appointment of the crown.

"The power proposed to be given by the plan to the Grand Council is only a concentration of the

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powers of the several Assemblies in certain points for the general welfare; as the power of the President-General is, of the powers of the several governors in the same points.

"And as the choice therefore of the Grand Council by the representatives of the people neither gives the people any new powers nor diminishes the power of the crown, it was thought and hoped the crown would not disapprove of it."

Upon the whole, the commissioners were of opinion that the choice was most properly placed in the representatives of the people.

ELECTION OF MEMBERS

That within —— months after the passing of such act, the House of Representatives that happens to be sitting within that time, or that shall be especially for that purpose convened, may and shall choose members for the Grand Council in the following proportion— that is to say:

Massachusetts Bay	7	*Pennsylvania*	6
New Hampshire	2	*Maryland*	4
Connecticut	5	*Virginia*	7
Rhode Island	2	*North Carolina*	4
New York	4	*South Carolina*	4
New Jersey	3		—
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It was thought that if the least colony was allowed more than two, and the others in proportion, the

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number would be very great, and the expense heavy; and that less than two would not be convenient, as a single person being by any accident prevented appearing at the meeting, the colony he ought to appear for would not be represented. That as the choice was not immediately popular, they would be generally men of good abilities for business, and men of reputation for integrity; and that forty-eight such men might be a number sufficient. But though it was thought reasonable that each colony should have a share in the representative body in some degree according to the proportion it contributed to the general treasury, yet the proportion of wealth or power of the colonies is not to be judged by the proportion here fixed; because it was at first agreed that the greatest colony should not have more than seven members, nor the least less than two; and the setting these proportions between these two extremes was not nicely attended to, as it would find itself, after the first election, from the sums brought into the treasury, as by a subsequent article.

PLACE OF FIRST MEETING

—who shall meet for the first time at the city of Philadelphia in Pennsylvania, being called by the President-General as soon as conveniently may be after his appointment.

Philadelphia was named as being nearer the centre of the colonies, where the commissioners would be well and cheaply accommodated. The high roads through the whole extent, are for the most part very

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good, in which forty or fifty miles a day may very well be, and frequently are, travelled. Great part of the way may likewise be gone by water. In summer time the passages are frequently performed in a week from Charleston to Philadelpiha and New York; and from Rhode Island to New York, through the Sound, in two or three days; and from New York to Philadelphia, by water and land, in two days, by stage, boats, and wheel carriages that set out every other day. The journey from Charleston to Philadelphia may likewise be facilitated by boats running up Chesapeake Bay three hundred miles. But if the whole journey be performed on horseback, the most distant members, viz., the two from New Hampshire and from South Carolina, may probably render themselves at Philadelphia in fifteen to twenty days; the majority may be there in much less time.

NEW ELECTION

That there shall be a new election of the members of the Grand Council every three years; and on the death or resignation of any member, his place should be supplied by a new choice at the next sitting of the Assembly of the colony he represented.

Some colonies have annual assemblies, some continue during a governor's pleasure; three years was thought a reasonable medium, as affording a new member time to improve himself in the business, and to act after such improvement, and yet giving opportunities, frequently enough, to change him if he has misbehaved.

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PROPORTION OF MEMBERS AFTER THE FIRST THREE YEARS

That after the first three years, when the proportion of money arising out of each colony to the general treasury can be known, the number of members to be chosen for each colony shall from time to time, in all ensuing elections, be regulated by that proportion, yet so as that the number to be chosen by any one province be not more than seven, nor less than two.

By a subsequent article it is proposed that the General Council shall lay and levy such general duties as to them may appear most equal and least burthensome, &c. Suppose, for instance, they lay a small duty or excise on some commodity imported into or made in the colonies, and pretty generally and equally used in all of them, as rum, perhaps, or wine; the yearly produce of this duty or excise, if fairly collected, would be in some colonies greater, in others less, as the colonies are greater or smaller. When the collector's accounts are brought in, the proportions will appear; and from them it is proposed to regulate the proportion of representatives to be chosen at the next general election, within the limits, however, of seven and two. These numbers may therefore vary in the course of years, as the colonies may in the growth and increase of people. And thus the quota of tax from each colony would naturally vary with its circumstances, thereby preventing all disputes and dissatisfaction about the just proportions due from each; which might otherwise produce pernicious consequences, and destroy

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the harmony and good agreement that ought to subsist between the several parts of the Union.

MEETINGS OF THE GRAND COUNCIL, AND CALL

That the Grand Council shall meet once in every year, and oftener if occasion require, at such time and place as they shall adjourn to at the last preceding meeting, or as they shall be called to meet at by the President-General on any emergency, he having first obtained in writing the consent of seven of the members to such call, and sent due and timely notice to the whole.

It was thought, in establishing and governing new colonies or settlements, regulating Indian trade, Indian treaties, &c., there would be every year sufficient business arise to require at least one meeting, and at such meeting many things might be suggested for the benefit of all the colonies. This annual meeting may either be at a time or place certain, to be fixed by the President-General and Grand Council at their first meeting; or left at liberty, to be at such time and place as they shall adjourn to, or be called to meet at by the President-General.

In time of war it seems convenient that the meeting should be in that colony which is nearest the seat of action.

The power of calling them on any emergency seemed necessary to be vested in the President-General; but that such power might not be wantonly used to harass the members, and oblige them to make frequent long journeys to little purpose, the consent of seven at least to such call was supposed a convenient guard.

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CONTINUANCE

That the Grand Council have power to choose their speaker, and shall neither be dissolved, prorogued, nor continued sitting longer than six weeks at one time, without their own consent or the special command of the crown.

The speaker should be presented for approbation; it being convenient, to prevent misunderstandings and disgusts, that the mouth of the Council should be a person agreeable, if possible, both to the Council and President-General.

Governors have sometimes wantonly exercised the power of proroguing or continuing the sessions of assemblies merely to harass the members and compel a compliance; and sometimes dissolve them on slight disgusts. This it was feared might be done by the President-General, if not provided against, and the inconvenience and hardship would be greater in the general government than in particular colonies, in proportion to the distance the members must be from home during sittings, and the long journeys some of them must necessarily take.

MEMBERS' ALLOWANCE

That the members of the Grand Council shall be allowed for their service ten shillings sterling per diem during their session and journey to and from the place of meeting; twenty miles to be reckoned a day's journey.

It was thought proper to allow *some* wages, lest the expense might deter some suitable persons from the service; and not to allow *too great* wages, lest

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unsuitable persons should be tempted to cabal for the employment, for the sake of gain. Twenty miles were set down as a day's journey, to allow for accidental hindrances on the road and the greater expenses of travelling than residing at the place of meeting.

ASSENT OF PRESIDENT-GENERAL AND HIS DUTY

That the assent of the President-General be requisite to all acts of the Grand Council, and that it be his office and duty to cause them to be carried into execution.

The assent of the President-General to all acts of the Grand Council was made necessary, in order to give the crown its due share of influence in this government, and connect it with that of Great Britain. The President-General, besides one half of the legislative power, hath in his hands the whole executive power.

POWER OF PRESIDENT-GENERAL AND GRAND COUNCIL; TREATIES OF PEACE AND WAR

That the President-General, with the advice of the Grand Council, hold or direct all Indian treaties in which the general interest of the colonies may be concerned; and make peace or declare war with Indian nations.

The power of making peace or war with Indian nations is at present supposed to be in every colony, and is expressly granted to some by charter, so that no new power is hereby intended to be granted to

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the colonies. But as, in consequence of this power, one colony might make peace with a nation that another was justly engaged in war with, or make war on slight occasions without the concurrence or approbation of neighbouring colonies greatly endangered by it, or make particular treaties of neutrality, in case of a general war, to their own private advantage in trade, by supplying the common enemy,—of all which there have been instances,—it was thought better to have all treaties of a general nature under a general direction, that so the good of the whole may be consulted and provided for.

INDIAN TRADE

That they make such laws as they judge necessary for regulating all Indian trade.

Many quarrels and wars have arisen between the colonies and Indian nations through the bad conduct of traders, who cheat the Indians after making them drunk, &c., to the great expense of the colonies, both in blood and treasure. Particular colonies are so interested in the trade, as not to be willing to admit such a regulation as might be best for the whole; and therefore it was thought best under a general direction.

INDIAN PURCHASES

That they make all purchases, from Indians for the crown, of lands not now within the bounds of particular colonies, or that shall not be within their bounds

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when some of them are reduced to more convenient dimensions.

Purchases from the Indians, made by private persons, have been attended with many inconveniences. They have frequently interfered and occasioned uncertainty of titles, many disputes and expensive lawsuits, and hindered the settlement of the land so disputed. Then the Indians have been cheated by such private purchases, and discontent and wars have been the consequence. These would be prevented by public, fair purchases.

Several of the colony charters in America extend their bounds to the South Sea, which may be perhaps, three or four thousand miles in length to one or two hundred miles in breadth. It is supposed they must in time be reduced to dimensions more convenient for the common purposes of government.

Very little of the land in those grants is yet purchased of the Indians.

It is much cheaper to purchase of them, than to take and maintain the possession by force; for they are generally very reasonable in their demands for land; and the expense of guarding a large frontier against their incursions is vastly great; because all must be guarded, and always guarded, as we know not where or when *to expect them.*[1]

[1] To guard against the incursions of the Indians, a plan was sent over to America (and, as I think, by authority), suggesting the expediency of clearing away the woods and bushes from a tract of land, a mile in breadth, and extending along the back of the colonies. Unfortunately, besides the large expense of the undertaking (which, if one acre cost £2 sterling, and six hundred and forty acres make a square mile, is £128,000 *first cost* for every hundred miles), it was forgotten that the Indians, like other people, knew the difference between

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NEW SETTLEMENTS

That they make new settlements on such purchases, by granting lands in the King's name, reserving a quit-rent to the crown for the use of the general treasury.

It is supposed better that there should be one purchaser than many; and that the crown should be that purchaser, or the Union in the name of the crown. By this means the bargains may be more easily made, the price not enhanced by numerous bidders, future disputes about private Indian purchases, and monopolies of vast tracts to particular persons (which are prejudicial to the settlement and peopling of the country), prevented; and the land being again granted in small tracts to the settlers, the quit-rents reserved may in time become a fund for support of government, for defence of the country, ease of taxes, &c.

Strong forts on the Lakes, the Ohio, &c., may, at the same time they secure our present frontiers, serve to defend new colonies settled under their protection; and such colonies would also mutually defend and support such forts, and better secure the friendship of the far Indians.

A particular colony has scarce strength enough to extend itself by new settlements, at so great a distance from the old; but the joint force of the Union

day and night, and that a mile of advance and another of retreat were nothing to the celerity of such an enemy. This plan, it is said, was the work of Dean Tucker.—B. V.

If the absurdity of such a scheme is not in itself sufficiently glaring, it may be added, that bushes would soon start up and grow into trees again, and the expense of clearing must be often repeated.

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might suddenly establish a new colony or two in those parts, or extend an old colony to particular passes, greatly to the security of our present frontiers, increase of trade and people, breaking off the French communication between Canada and Louisiana, and speedy settlement of the intermediate lands.

The power of settling new colonies is, therefore, thought a valuable part of the plan, and what cannot so well be executed by two unions as by one.

LAWS TO GOVERN THEM

That they make laws for regulating and governing such new settlements till the crown shall think fit to form them into particular governments.

The making of laws suitable for the new colonies it was thought, would be properly vested in the President-General and Grand Council, under whose protection they must at first necessarily be, and who would be well acquainted with their circumstances, as having settled them. When they are become sufficiently populous, they may by the crown be formed into complete and distinct governments.

The appointment of a sub-president by the crown, to take place in case of the death or absence of the President-General, would perhaps be an improvement of the plan; and if all the governors of particular provinces were to be formed into a standing council of state, for the advice and assistance of the President-General, it might be another considerable improvement.

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RAISE SOLDIERS AND EQUIP VESSELS, &c.

That they raise and pay soldiers and build forts for the defence of any of the colonies, and equip vessels of force to guard the coasts and protect the trade on the ocean, lakes, or great rivers; but they shall not impress men in any colony without the consent of the legislature.

It was thought that quotas of men, to be raised and paid by the several colonies, and joined for any public service, could not always be got together with the necessary expedition. For instance, suppose one thousand men should be wanted in New Hampshire on any emergency. To fetch them by fifties and hundreds out of every colony, as far as South Carolina, would be inconvenient, the transportation chargeable, and the occasion perhaps passed before they could be assembled; and therefore that it would be best to raise them (by offering bounty-money and pay) near the place where they would be wanted, to be discharged again when the service should be over.

Particular colonies are at present backward to build forts at their own expense, which they say will be equally useful to their neighbouring colonies, who refuse to join, on a presumption that such forts *will* be built and kept up, though they contribute nothing. This unjust conduct weakens the whole; but the forts being for the good of the whole, it was thought best they should be built and maintained by the whole out of the common treasury.

In the time of war, small vessels of force are sometimes necessary in the colonies to scour the coasts of small privateers. These being provided

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by the Union will be an advantage in turn to the colonies which are situated on the sea, and whose frontiers on the landside, being covered by other colonies, reap but little immediate benefit from the advanced forts.

POWER TO MAKE LAWS, LAY DUTIES, &C.

That for these purposes they have power to make laws, and lay and levy such general duties, imposts, or taxes as to them shall appear most equal and just (considering the ability and other circumstances of the inhabitants in the several colonies), and such as may be collected with the least inconvenience to the people; rather discouraging luxury than loading industry with unnecessary burthens.

The laws which the President-General and Grand Council are empowered to make *are such only* as shall be necessary for the government of the settlements; the raising, regulating, and paying soldiers for the general service; the regulating of Indian trade, and laying and collecting the general duties and taxes. They should also have a power to restrain the exportation of provisions to the enemy from any of the colonies, on particular occasions, in time of war. But it is not intended that they may interfere with the constitution and government of the particular colonies, who are to be left to their own laws, and to lay, levy, and apply their own taxes as before.

GENERAL TREASURER AND PARTICULAR TREASURER

That they may appoint a General Treasurer and Particular Treasurer in each government, when

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necessary; and from time to time may order the sums in the treasuries of each government into the general treasury, or draw on them for special payments, as they find most convenient.

The treasurers here meant are only for the general funds, and not for the particular funds of each colony, which remain in the hands of their own treasurers at their own disposal.

MONEY, HOW TO ISSUE

Yet no money to issue but by joint orders of the President-General and Grand Council; except where sums have been appropriated to particular purposes, and the President-General is previously empowered by an act to draw such sums.

To prevent misapplication of the money, or even application that might be dissatisfactory to the crown or the people, it was thought necessary to join the President-General and Grand Council in all issues of money.

ACCOUNTS

That the general accounts shall be yearly settled and reported to the several Assemblies.

By communicating the accounts yearly to each Assembly, they will be satisfied of the prudent and honest conduct of their representatives in the Grand Council.

QUORUM

That a quorum of the Grand Council, empowered to act with the President-General, do consist of twenty-

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five members, among whom there shall be one or more from a majority of the colonies.

The quorum seems large, but it was thought it would not be satisfactory to the colonies in general to have matters of importance to the whole transacted by a smaller number, or even by this number of twenty-five, unless there were among them one at least from a majority of the colonies; because otherwise, the whole quorum being made up of members from three or four colonies at one end of the union, something might be done that would not be equal with respect to the rest, and thence dissatisfaction and discords might arise to the prejudice of the whole.

LAWS TO BE TRANSMITTED

That the laws made by them for the purposes aforesaid shall not be repugnant, but, as near as may be, agreeable to the laws of England, and shall be transmitted to the King in Council for approbation as soon as may be after their passing; and if not disapproved within three years after presentation, to remain in force.

This was thought necessary for the satisfaction of the crown, to preserve the connexion of the parts of the British empire with the whole, of the members with the head, and to induce greater care and circumspection in making of the laws, that they be good in themselves and for the general benefit.

DEATH OF THE PRESIDENT-GENERAL

That in case of the death of the President-General, the Speaker of the Grand Council for the time being

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shall succeed, and be vested with the same powers and authorities, to continue till the King's pleasure be known.

It might be, perhaps, as was said before, if the crown appointed a vice-president, to take place on the death or absence of the President-General; for so we should be more sure of a suitable person at the head of the colonies. On the death or absence of both, the speaker to take place (or rather the eldest King's governor) till his Majesty's pleasure be known.

OFFICERS, HOW APPOINTED

That all military commission officers, whether for land or sea service, to act under this general constitution, shall be nominated by the President-General; but the approbation of the Grand Council is to be obtained before they receive their commissions. And all civil officers are to be nominated by the Grand Council, and to receive the President-General's approbation before they officiate.

It was thought it might be very prejudicial to the service to have officers appointed unknown to the people, or unacceptable; the generality of Americans serving willingly under officers they know, and not caring to engage in the service under strangers, or such as are often appointed by governors through favor or interest. The service here meant is not the stated, settled service in standing troops, but any sudden and short service, either for defence of our colonies or invading the enemy's country (such as the expedition to Cape Breton in the last war, in which many substantial farmers and tradesmen en-

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gaged as common soldiers, under officers of their own country, for whom they had an esteem and affection, who would not have engaged in a standing army or under officers from England). It was therefore thought best to give the Council the power of approving the officers, which the people will look upon as a great security of their being good men. And without some such provision as this, it was thought the expense of engaging men in the service on any emergency would be much greater, and the number who could be induced to engage much less, and that therefore it would be most for the King's service and general benefit of the nation that the prerogative should relax a little in this particular throughout all the colonies in America, as it had already done much more in the charters of some particular colonies, viz., Connecticut and Rhode Island.

The civil officers will be chiefly treasurers and collectors of taxes; and the suitable persons are most likely to be known by the Council.

VACANCIES, HOW SUPPLIED

But in case of vacancy by death or removal of any officer, civil or military, under this constitution, the Governor of the province in which such vacancy happens may appoint, till the pleasure of the President-General and Grand Council can be known.

The vacancies were thought best supplied by the governors in each province, till a new appointment can be regularly made; otherwise the service might suffer before the meeting of the President-General and Grand Council.

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EACH COLONY MAY DEFEND ITSELF ON EMERGENCY, &C.

That the particular military as well as civil establishments in each colony remain in their present state, the general constitution notwithstanding; and that on sudden emergencies any colony may defend itself, and lay the accounts of expense thence arising before the President-General and General Council, who may allow and order payment of the same, as far as they judge such accounts just and reasonable.

Otherwise the union of the whole would weaken the parts, contrary to the design of the Union. The accounts are to be judged of by the President-General and Grand Council, and allowed if found reasonable. This was thought necessary to encourage colonies to defend themselves, as the expense would be light when borne by the whole; and also to check imprudent and lavish expense in such defences.

CXIII

THREE LETTERS TO GOVERNOR SHIRLEY

LETTER I [1]

CONCERNING THE VOICE OF THE PEOPLE IN CHOOSING THE RULERS BY WHOM TAXES ARE IMPOSED

Tuesday Morning [December 17, 1754].

SIR:—I return you the loose sheets of the plan, with thanks to your Excellency for communicating them.

[1] It is stated by Mr. Benjamin Vaughan, that these letters first appeared in the *London Chronicle* for February 6 and 8, 1766, with prefatory remarks signed "A LOVER OF BRITAIN."

"The Albany Plan of Union," says this writer, "was sent to the

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I apprehend, that excluding the people of the colonies from all share in the choice of the grand council will give extreme dissatisfaction, as well as the taxing them by act of Parliament, where they have no representation. It is very possible that this general government might be as well and faithfully administered without the people as with them; but where heavy burthens are to be laid upon them, it has been found useful to make it as much as possible

government here for approbation. Had it been approved and established by the authority from hence, English America thought itself sufficiently able to cope with the French, without other assistance; several of the colonies having alone, in former wars, withstood the whole power of the enemy, unassisted not only by the mother country, but by any of the neighboring provinces. The plan, however, was not approved here; but a *new one* was formed instead of it; by which it was proposed, that 'the governors of all the colonies, attended by one or two members of their respective councils, should assemble, and concert measures for the defence of the whole, erect forts where they judged proper, and raise what troops they thought necessary, with power to draw on the treasury here for the sums that should be wanted, and the treasury to be reimbursed by a *tax laid on the colonies by act of Parliament.*'—This *new plan*, being communicated by Governor Shirley to a gentleman of Philadelphia (Dr. Franklin) then in Boston (who has very eminently distinguished himself, before and since that time, in the literary world, and whose judgment, penetration, and candor, as well as his readiness and ability to suggest, forward, or carry into execution, every scheme of public utility, hath most deservedly endeared him, not only to our fellow-subjects throughout the continent of North America, but to his numberless friends on this side the Atlantic), occasioned the following remarks from him, which perhaps may contribute in some degree to its being laid aside. As they very particularly show the then sentiments of the Americans on the subject of a parliamentary tax, before the French power in that country was subjected, and before the late restraints on their commerce, they satisfy me, and I hope they will convince your readers, contrary to what has been advanced by some of your correspondents, that those particulars have had no share in producing the present opposition to such a tax, nor in disturbances occasioned by it, which these papers indeed do almost prophetically foretell."

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their own act; for they bear better, when they have, or think they have, some share in the direction; and when any public measures are generally grievous, or even distasteful, to the people, the wheels of government move more heavily.

LETTER II

ON THE IMPOSITION OF DIRECT TAXES UPON THE COLONIES WITHOUT THEIR CONSENT

Wednesday Morning [December 18, 1754].

SIR:—I mentioned it yesterday to your Excellency as my opinion, that excluding the people of the colonies from all share in the choice of the grand council would probably give extreme dissatisfaction, as well as the taxing them by act of Parliament, where they have no representation. In matters of general concern to the people, and especially where burthens are to be laid upon them, it is of use to consider, as well what they will be apt to think and say, as what they ought to think. I shall therefore, as your Excellency requires it of me, briefly mention what of either kind occurs to me on this occasion.

First, they will say, and perhaps with justice, that the body of the people in the colonies are as loyal, and as firmly attached to the present constitution and reigning family, as any subjects in the King's dominions.

That there is no reason to doubt the readiness and willingness of the representatives they may choose to grant from time to time such supplies for the de-

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fence of the country as shall be judged necessary, so far as their abilities will allow.

That the people in the colonies who are to feel the immediate mischiefs of invasion and conquest by an enemy, in the loss of their estates, lives, and liberties, are likely to be better judges of the quantity of forces necessary to be raised and maintained, forts to be built and supported, and of their own abilities to bear the expense, than the Parliament of England, at so great a distance.

That governors often come to the colonies merely to make fortunes, with which they intend to return to Britain; are not always men of the best ability and integrity; have many of them no estates here, nor any natural connexion with us that should make them heartily concerned for our welfare; and might possibly be fond of raising and keeping up more forces than necessary, from the profits accruing to themselves, and to make provision for their friends and dependents.

That the counsellors in most of the colonies being appointed by the crown, on the recommendation of governors, are often persons of small estates, frequently dependent on the governors for office, and therefore too much under influence.

That there is therefore great reason to be jealous of a power in such governors and councils to raise such sums as they shall judge necessary, by drafts on the Lords of the Treasury, to be afterwards laid on the colonies by act of Parliament, and paid by the people here; since they might abuse it by projecting useless expeditions, harassing the people, and taking

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them from their labor to execute such projects, merely to create offices and employments, and gratify their dependents, and divide profits.

That the Parliament of England is at a great distance, subject to be misinformed and misled by such governors and councils, whose united interests might possibly secure them against the effect of any complaint from hence.

That it is supposed an undoubted right of Englishmen not to be taxed but by their own consent, given through their representatives.

That the colonies have no representatives in Parliament.

That to propose taxing them by Parliament, and refuse them the liberty of choosing a representative council to meet in the colonies, and consider and judge of the necessity of any general tax and the quantum, shows a suspicion of their loyalty to the crown, or of their regard for their country, or of their common sense and understanding, which they have not deserved.

That compelling the colonies to pay money without their consent, would be rather like raising contributions in an enemy's country, than taxing of Englishmen for their own public benefit.

That it would be treating them as a conquered people, and not as true British subjects.

That a tax laid by the representatives of the colonies might be easily lessened as the occasions should lessen; but being once laid by Parliament, under the influence of the representations made by governors, would probably be kept up and continued for the

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benefit of governors, to the grievous burthen and discontent of the colonies, and preventions of their growth and increase.

That a power in governors to march the inhabitants from one end of the British and French colonies to the other, being a country of at least one thousand five hundred miles long, without the approbation or the consent of their representatives first obtained to such expeditions, might be grievous and ruinous to the people, and would put them upon a footing with the subjects of France in Canada, that now groan under such oppression from their governor, who for two years past has harassed them with long and destructive marches to Ohio.

That if the colonies in a body may be well governed by governors and councils appointed by the crown, without representatives, particular colonies may as well or better be so governed; a tax may be laid upon them all by act of Parliament for support of government, and their Assemblies may be dismissed as an useless part of the constitution.

That the powers, proposed by the Albany Plan of Union to be vested in a grand council representative of the people, even with regard to military matters, are not so great as those which the colonies of Rhode Island and Connecticut are intrusted with by their charters, and have never abused; for, by this plan, the president-general is appointed by the crown, and controls all by his negative; but in those governments the people choose the governor, and yet allow him no negative.

That the British colonies bordering on the French

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are properly frontiers of the British empire; and the frontiers of an empire are properly defended at the joint expense of the body of the people in such empire. It would now be thought hard by act of Parliament to oblige the Cinque Ports or sea-coasts of Britain to maintain the whole navy, because they are more immediately defended by it, not allowing them at the same time a vote in choosing members of the Parliament; and as the frontiers of America bear the expense of their own defence, it seems hard to allow them no share in voting the money, judging of the necessity and sum, or advising the measures.

That, besides the taxes necessary for the defence of the frontiers, the colonies pay yearly great sums to the mother country unnoticed; for

1. Taxes paid in Britain by the landholder or artificer must enter into and increase the price of the produce of land and manufactures made of it; and great part of this is paid by consumers in the colonies, who thereby pay a considerable part of the British taxes.

2. We are restrained in our trade with foreign nations; and where we could be supplied with any manufacture cheaper from them, but must buy the same dearer from Britain, the difference of price is a clear tax to Britain.

3. We are obliged to carry a great part of our produce directly to Britain; and where the duties laid upon it lessen its price to the planter, or it sells for less than it would in foreign markets, the difference is a tax paid to Britain.

4. Some manufactures we could make, but are for-

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bidden, and must take them of British merchants; the whole price is a tax paid to Britain.

5. By our greatly increasing the demand and consumption of British manufactures, their price is considerably raised of late years; the advantage is clear profit to Britain, and enables its people better to pay great taxes; and much of it being paid by us, is clear tax to Britain.

6. In short, as we are not suffered to regulate our trade and restrain the importation and consumption of British superfluities, as Britain can the consumption of foreign superfluities, our whole wealth centres finally amongst the merchants and inhabitants of Britain; and if we make them richer, and enable them better to pay their taxes, it is nearly the same as being taxed ourselves, and equally beneficial to the crown.

These kinds of secondary taxes, however, we do not complain of, though we have no share in the laying or disposing of them; but to pay immediate heavy taxes, in the laying, appropriation, and disposition of which we have no part, and which perhaps we may know to be as unnecessary as grievous, must seem hard measures to Englishmen, who cannot conceive that by hazarding their lives and fortunes in subduing and settling new countries, extending the dominion and increasing the commerce of the mother nation, they have forfeited the native rights of Britons, which they think ought rather to be given to them, as due to such merit, if they had been before in a state of slavery.

These, and such kinds of things as these, I appre-

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hend will be thought and said by the people, if the proposed alteration of the Albany plan should take place. Then the administration of the board of governors and council so appointed, not having the representative body of the people to approve and unite in its measures, and conciliate the minds of the people to them, will probably become suspected and odious, dangerous animosities and feuds will arise between the governors and governed, and every thing go into confusion.

Perhaps I am too apprehensive in this matter; but having freely given my opinion and reasons, your Excellency can judge better than I whether there be any weight in them; and the shortness of the time allowed me will, I hope, in some degree excuse the imperfections of this scrawl.

With the greatest respect and fidelity, I have the honor to be

Your Excellency's most obedient
and most humble servant,
B. FRANKLIN.[1]

[1] Respecting this letter, Mr. John Adams said (in his *History of the Dispute with America*, first published in 1774): "Dr. Franklin, who was known to be an active and very able man, and to have great influence in the province of Pennsylvania, was in Boston in the year 1754, and Mr. Shirley communicated to him the profound secret, the great design of taxing the colonies by act of Parliament. This sagacious gentleman and distinguished patriot, to his lasting honor, sent the governor an answer in writing, with the following remarks on his scheme:" Mr. Adams then quotes the principal parts of the above letter.—EDITOR.

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LETTER III

ON THE SUBJECT OF UNITING THE COLONIES MORE INTIMATELY WITH GREAT BRITAIN, BY ALLOWING THEM REPRESENTATIVES IN PARLIAMENT

BOSTON, December 22, 1754.

SIR:—Since the conversation your Excellency was pleased to honor me with, on the subject of *uniting the colonies* more intimately with Great Britain, by allowing them *representatives in Parliament*, I have something further considered that matter, and am of opinion that such a union would be very acceptable to the colonies, provided they had a reasonable number of representatives allowed them; and that all the old acts of Parliament restraining the trade or cramping the manufactures of the colonies be at the same time repealed, and the British subjects *on this side the water* put, in those respects, on the same footing with those in Great Brtiain, till the new Parliament, representing the whole, shall think it for the interest of the whole to re-enact some or all of them. It is not that I imagine so many representatives will be allowed the colonies as to have any great weight by their numbers, but I think there might be sufficient to occasion those laws to be better and more impartially considered, and perhaps to overcome the interest of a petty corporation, or of any particular set of artificers or traders in England, who heretofore seem, in some instances, to have been more regarded than all the colonies, or than was consistent with the general interest or best national good. I think, too, that the government of the colonies by a Parliament in

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which they are fairly represented, would be vastly more agreeable to the people than the method lately attempted to be introduced by royal instruction, as well as more agreeable to the nature of an English constitution and to English liberty; and that such laws as now seem to bear hard on the colonies, would (when judged by such a Parliament for the best interest of the whole) be more cheerfully submitted to and more easily executed.

I should hope, too, that by such a union the people of Great Britain and the people of the colonies would learn to consider themselves as not belonging to different communities with different interests, but to one community with one interest; which I imagine would contribute to strengthen the whole, and greatly lessen the danger of future separations.

It is, I suppose, agreed to be the general interest of any state, that its people be numerous and rich; men enow to fight in its defence, and enow to pay sufficient taxes to defray the charge; for these circumstances tend to the security of the state and its protection from foreign power. But it seems not of so much importance whether the fighting be done by John or Thomas, or the tax paid by William or Charles. The iron manufacture employs and enriches British subjects, but is it of any importance to the state whether the manufacturer lives at Birmingham, or Sheffield, or both, since they are still within its bounds, and their wealth and persons still at its command? Could the Goodwin Sands be laid dry by banks, and land equal to a large country

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thereby gained to England, and presently filled with English inhabitants, would it be right to deprive such inhabitants of the common privileges enjoyed by other Englishmen,—the right of vending their produce in the same ports, or of making their own shoes, because a merchant or a shoemaker living on the old land might fancy it more for his advantage to trade or make shoes for them? Would this be right even if the land were gained at the expense of the state? And would it not seem less right if the charge and labor of gaining the additional territory to Britain had been borne by the settlers themselves? And would not the hardship appear yet greater if the people of the new country should be allowed no representatives in the Parliament enacting such impositions?

Now, I look on the colonies as so many countries gained to Great Britain, and more advantageous to it than if they had been gained out of the seas around its coasts and joined to its lands; for, being in different climates, they afford greater variety of produce and materials for more manufactures, and being separated by the ocean, they increase much more its shipping and seamen; and since they are all included in the British empire, which has only extended itself by their means, and the strength and wealth of the parts are the strength and wealth of the whole, what imports it to the general state whether a merchant, a smith, or a hatter grows rich in Old or New England? And if, through increase of the people, two smiths are wanted for one employed before, why may not the *new* smith be allowed to live and thrive in

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the *new* country, as well as the *old* one in the *old?* In fine, why should the countenance of a state be *partially* afforded to its people, unless it be most in favor of those who have most merit? And if there be any difference, those who have most contributed to enlarge Britain's empire and commerce, increase her strength, her wealth, and the numbers of her people, at the risk of their own lives and private fortunes in new and strange countries, methinks ought rather to expect some preference. With the greatest respect and esteem, I have the honor to be

Your Excellency's most obedient
and humble servant,

B. FRANKLIN.

CXIV

TO MISS CATHERINE RAY, AT BLOCK ISLAND

PHILADELPHIA, 4 March, 1755.

DEAR KATY:—Your kind letter of January 20th is but just come to hand, and I take this first opportunity of acknowledging the favor. It gives me great pleasure to hear that you got home safe and well that day. I thought too much was hazarded, when I saw you put off to sea in that very little skiff, tossed by every wave. But the call was strong and just—a sick parent. I stood on the shore and looked after you till I could no longer distinguish you even with my glass; then returned to your sister's, praying for your safe passage. Towards evening all agreed that you must certainly be arrived before that time, the weather

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having been so favorable, which made me more easy and cheerful, for I had been truly concerned for you.

I left New England slowly, and with great reluctance. Short day's journeys, and loitering visits on the road, for three or four weeks, manifested my unwillingness to quit a country in which I drew my first breath, spent my earliest and most pleasant days, and had now received so many fresh marks of the people's goodness and benevolence, in the kind and affectionate treatment I had everywhere met with. I almost forgot I had a *home*, till I was more than half way towards it; till I had, one by one, parted with all my New England friends, and was got into the western borders of Connecticut, among mere strangers. Then, like an old man, who, having buried all he loved in this world, begins to think of heaven, I began to think of and wish for home; and as I drew nearer, I found the attraction stronger and stronger. My diligence and speed increased with my impatience. I drove on violently, and made such long stretches, that a very few days brought me to my own house, and to the arms of my good old wife and children, where I remain, thanks to God, at present well and happy.

Persons subject to the *hyp* complain of the northeast wind, as increasing their malady. But since you promised to send me kisses in that wind, and I find you as good as your word, it is to me the gayest wind that blows, and gives me the best spirits. I write this during a northeast storm of snow, the greatest we have had this winter. Your favors come mixed with the snowy fleeces, which are pure as your virgin innocence, white as your lovely bosom, and—as cold.

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But let it warm towards some worthy young man, and may Heaven bless you both with every kind of happiness.

I desired Miss Anna Ward to send you over a little book I left with her, for your amusement in that lonely island. My respects to your good father, and mother, and sister. Let me often hear of your welfare, since it is not likely I shall ever again have the pleasure of seeing you. Accept mine and my wife's sincere thanks for the many civilities I receive from you and your relations; and do me the justice to believe me, dear girl, your affectionate, faithful friend and humble servant, B. FRANKLIN.

P. S.—My respectful compliments to your good brother Ward, and sister; and to the agreeable family of the Wards at Newport, when you see them. Adieu.

CXV

ELECTRICAL EXPERIMENTS

Made in Pursuance of those made by Mr. Canton, dated December 6, 1753; with Explanations, by Benjamin Franklin

READ AT THE ROYAL SOCIETY, DECEMBER 18, 1755

PHILADELPHIA, 14 March, 1755.

PRINCIPLES

I. Electric atmospheres that flow round non-electric bodies, being brought near each other, do not

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readily mix and unite into one atmosphere, but remain separate and repel each other.

This is plainly seen in suspended cork balls and other bodies electrified.

II. An electric atmosphere not only repels another electric atmosphere, but will also repel the electric matter contained in the substance of a body approaching it, and, without joining or mixing with it, force it to other parts of the body that contained it.

This is shown by some of the following experiments.

III. Bodies electrified negatively, or deprived of their natural quantity of electricity, repel each other (or at least appear to do so by a mutual receding), as well as those electrified positively, or which have electric atmospheres.

This is shown by applying the negatively charged wire of a phial to two cork balls suspended by silk threads, and many other experiments.

Fix a tassel of fifteen or twenty threads, three inches long, at one end of a tin prime conductor (mine is about five feet long and four inches diameter) supported by silk lines.

Let the threads be a little damp, but not wet.

Pass an excited glass tube near the other end of the prime conductor, so as to give it some sparks, and the threads will diverge.

Because each thread, as well as the prime conductor, has acquired an electric atmosphere, which repels and is repelled by the atmospheres of the other threads; if those several atmospheres would readily mix, the threads might unite, and hang in the middle of one atmosphere, common to them all.

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Rub the tube afresh, and approach the prime conductor therewith, crosswise, near that end, but not nigh enough to give sparks, and the threads will diverge a little more.

Because the atmosphere of the prime conductor is pressed by the atmosphere of the excited tube, and driven towards the end where the threads are, by which each thread acquires more atmosphere.

Withdraw the tube, and they will close as much.

They close as much, and no more, because the atmosphere of the glass tube, not having mixed with the atmosphere of the prime conductor, is withdrawn entire, having made no addition to or diminution from it.

Bring the excited tube under the tuft of threads, and they will close a little.

They close, because the atmosphere of the glass tube repels their atmospheres, and drives part of them back on the prime conductor.

Withdraw it, and they will diverge as much.

For the portion of atmosphere which they had lost returns to them again.

Excite the glass tube and approach the prime conductor with it, holding it across, near the end opposite to that on which the threads hang, at the distance of five or six inches. Keep it there a few seconds, and the threads of the tassels will diverge. Withdraw it, and they will close.

They diverge, because they have received electric atmospheres from the electric matter before contained in the substance of the prime conductor, but which is now repelled and driven away by the atmosphere of the glass tube from the parts of the prime

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conductor opposite and nearest to that atmosphere, and forced out upon the surface of the prime conductor at its other end, and upon the threads hanging thereto. Were it any part of the atmosphere of the glass tube that flowed over and along the prime conductor to the threads, and gave them atmospheres (as is the case when a spark is given to the prime conductor from the glass tube), such part of the tube's atmosphere would have remained, and the threads continue to diverge; but they close on withdrawing the tube, because the tube takes with it *all its own atmosphere*, and the electric matter, which had been driven out of the substance of the prime conductor, and formed atmospheres round the threads, is thereby permitted to return to its place.

Take a spark from the prime conductor near the threads, when they are diverged as before, and they will close.

For by so doing you take away their atmospheres, composed of the electric matter driven out of the substance of the prime conductor, as aforesaid, by the repellency of the atmosphere of the glass tube. By taking this spark you rob the prime conductor of part of its natural quantity of the electric matter, which part so taken is not supplied by the glass tube, for, when that is afterwards withdrawn, it takes with it its whole atmosphere, and leaves the prime conductor electrized negatively, as appears by the next operation.

Then withdraw the tube, and they will open again.

For now the electric matter in the prime conductor returning to its equilibrium, or equal diffusion, in

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all parts of its substance, and the prime conductor having lost some of its natural quantity, the threads connected with it lose part of theirs, and so are electrized negatively, and therefore repel each other, by *Principle* III.

Approach the prime conductor with the tube, near the same place as at first, and they will close again.

Because the part of their natural quantity of electric fluid which they had lost is now restored to them again, by the repulsion of the glass tube forcing that fluid to them from other parts of the prime conductor; so they are now again in their natural state.

Withdraw it, and they will open again.

For what had been restored to them is now taken from them again, flowing back into the prime conductor, and leaving them once more electrized negatively.

Bring the excited tube under the threads, and they will diverge more.

Because more of their natural quantity is driven from them into the prime conductor, and thereby their negative electricity increased.

The prime conductor not being electrified, brings the excited tube under the tassel, and the threads will diverge.

Part of their natural quantity is thereby driven out of them into the prime conductor, and they become negatively electrized, and therefore repel each other.

Keeping the tube in the same place with one hand, attempt to touch the threads with the finger of the other hand, and they will recede from the finger.

Because the finger being plunged into the atmosphere of the glass tube, as well as the threads, part

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of its natural quantity is driven back through the hand and body by that atmosphere, and the finger becomes, as well as the threads, negatively electrized, and so repels, and is repelled by them. To confirm this, hold a slender, light lock of cotton, two or three inches long, near a prime conductor that is electrified by a glass globe or tube. You will see the cotton stretch itself out towards the prime conductor. Attempt to touch it with the finger of the other hand, and it will be repelled by the finger. Approach it with a positively charged wire of a bottle, and it will fly to the wire. Bring it near a negatively charged wire of a bottle, it will recede from that wire in the same manner that it did from the finger; which demonstrates the finger to be negatively electrized, as well as the lock of cotton so situated.

Turkey killed by Electricity.—Effect of a Shock on the Operator in making the Experiment

As Mr. Franklin, in a former letter to Mr. Collinson, mentioned his intending to try the power of a very strong electrical shock upon a turkey, that gentleman accordingly has been so very obliging as to send an account of it, which is to the following purpose:

He made first several experiments on fowls, and found that two large, thin glass jars gilt, holding each about six gallons, were sufficient, when fully charged, to kill common hens outright; but the turkeys, though thrown into violent convulsions,

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and then lying as dead for some minutes, would recover in less than a quarter of an hour. However, having added three other such to the former two, though not fully charged, he killed a turkey of about ten pounds weight, and believes that they would have killed a much larger. He conceited, as himself says, that the birds killed in this manner eat uncommonly tender.

In making these experiments, he found that a man could, without great detriment, bear a much greater shock than he had imagined; for he inadvertently received the stroke of two of these jars through his arms and body, when they were very near fully charged. It seemed to him a universal blow throughout the body from head to foot, and was followed by a violent, quick trembling in the trunk which went off gradually in a few seconds. It was some minutes before he could recollect his thoughts so as to know what was the matter; for he did not see the flash, though his eye was on the spot of the prime conductor, from whence it struck the back of his hand; nor did he hear the crack, though the by-standers said it was a loud one; nor did he particularly feel the stroke on his hand, though he afterwards found it had raised a swelling there of the bigness of half a pistol-bullet. His arms and the back of the neck felt somewhat numbed the remainder of the evening, and his breast was sore for a week after, as if it had been bruised. From this experiment may be seen the danger, even under the greatest caution, to the operator, when making these experiments with large jars; for it is not to be

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doubted but several of these fully charged would as certainly, by increasing them in proportion to the size, kill a man, as they before did a turkey.

CXVI

TO JOHN LINING, AT CHARLESTON, SOUTH CAROLINA

PHILADELPHIA, 18 March, 1755.

SIR:—I send you enclosed a paper containing some new experiments I have made, in pursuance of those by Mr. Canton, that are printed with my last letters. I hope these, with my explanation of them, will afford you some entertainment.[1]

In answer to your several inquiries. The tubes and globes we use here are chiefly made here. The glass has a greenish cast, but is clear and hard, and, I think, better for electrical experiments than the white glass of London, which is not so hard. There are certainly great differences in glass. A white globe I had made here some years since, would never, by any means, be excited. Two of my friends tried it, as well as myself, without success. At length, putting it on an electric stand, a chain from the prime conductor being in contact with it, I found it had the properties of a non-electric; for I could draw sparks from any part of it, though it was very clean and dry.

All I know of Domien is, that by his own account he was a native of Transylvania, of Tartar descent, but a priest of the Greek Church; he spoke and

[1] See No. CXV.

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wrote Latin very readily and correctly. He set out from his own country with an intention of going round the world, as much as possible by land. He travelled through Germany, France, and Holland, to England. Resided some time at Oxford. From England he came to Maryland; thence went to New England; returned by land to Philadelphia; and from hence travelled through Maryland, Virginia, and North Carolina to you. He thought it might be of service to him in his travels to know something of electricity. I taught him the use of the tube, how to charge the Leyden phial, and some other experiments. He wrote to me from Charleston, that he lived eight hundred miles upon electricity; it had been meat, drink, and clothing to him. His last letter to me was, I think, from Jamaica, desiring me to send the tubes you mention, to meet him at the Havana, from whence he expected to get a passage to La Vera Cruz; designed travelling over land through Mexico to Acapulco; thence to get a passage to Manilla, and so through China, India, Persia, and Turkey, home to his own country, proposing to support himself chiefly by electricity. A strange project! But he was, as you observe, a very singular character. I was sorry the tubes did not get to the Havana in time for him. If they are still in being, please to send for them, and accept of them. What became of him afterwards, I have never heard. He promised to write to me as often as he could on his journey, and as soon as he should get home after finishing his tour. It is now seven years since he was here. If he is still in New Spain, as you im-

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agine from that loose report, I suppose it must be that they confine him there, and prevent his writing; but I think it more likely that he may be dead.

The questions you ask about the pores of glass, I cannot answer otherwise than that I know nothing of their nature; and suppositions, however ingenious, are often mere mistakes. My hypothesis, that they were smaller near the middle of the glass,—too small to admit the passage of electricity, which could pass through the surface till it came near the middle, was certainly wrong. For soon after I had written that letter, I did, in order to *confirm* the hypothesis (which indeed I ought to have done before I wrote it), make an experiment. I ground away five sixths of the thickness of the glass from the side of one of my phials, expecting that, the supposed denser part being so removed, the electric fluid might come through the remainder of the glass, which I had imagined more open; but I found myself mistaken. The bottle charged as well after the grinding as before. I am now as much as ever at a loss to know how or where the quantity of electric fluid on the positive side of the glass is disposed of.

As to the difference of conductors, there is not only this, that some will conduct electricity in small quantities, and yet do not conduct it fast enough to produce the shock; but even among those that will conduct a shock, there are some that do it better than others. Mr. Kinnersley has found, by a very good experiment, that when the charge of a bottle hath an opportunity of passing two ways, that is, straight through a trough of water ten feet long and six

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inches square, or round about through twenty feet of wire, it passes through the wire, and not through the water, though that is the shortest course; the wire being the better conductor. When the wire is taken away, it passes through the water, as may be felt by a hand plunged in the water; but it cannot be felt in the water when the wire is used at the same time. Thus, though a small phial containing water will give a smart shock, one containing the same quantity of mercury will give one much stronger, the mercury being the better conductor; while one containing oil only, will scarce give any shock at all.

Your question, how I came first to think of proposing the experiment of drawing down the lightning in order to ascertain its sameness with the electric fluid, I cannot answer better than by giving you an extract from the minutes I used to keep of the experiments I made, with memorandums of such as I purposed to make, the reasons for making them, and the observations that arose upon them, from which minutes my letters were afterwards drawn. By this extract you will see that the thought was not so much "an out-of-the-way one," but that it might have occurred to an electrician.

"*November 7th, 1749.* Electrical fluid agrees with lightning in these particulars: 1. Giving light. 2. Color of the light. 3. Crooked direction. 4. Swift motion. 5. Being conducted by metals. 6. Crack or noise in exploding. 7. Subsisting in water or ice. 8. Rending bodies it passes through. 9. Destroying animals. 10. Melting metals. 11. Firing inflammable substances. 12. Sulphureous smell. The elec-

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tric fluid is attracted by points. We do not know whether this property is in lightning. But since they agree in all the particulars wherein we can already compare them, is it not probable they agree likewise in this? Let the experiment be made."

I wish I could give you any satisfaction in the article of clouds. I am still at a loss about the manner in which they become charged with electricity; no hypothesis I have yet formed perfectly satisfying me. Some time since, I heated very hot a brass plate, two feet square, and placed it on an electric stand. From the plate a wire extended horizontally four or five feet, and, at the end of it, hung, by linen threads, a pair of cork balls. I then repeatedly sprinkled water over the plate, that it might be raised from it in vapor, hoping, that, if the vapor either carried off the electricity of the plate, or left behind it that of the water (one of which I supposed it must do, if, like the clouds, it became electrized itself, either positively or negatively), I should perceive and determine it by the separation of the balls, and by finding whether they were positive or negative; but no alteration was made at all, nor could I perceive that the steam was itself electrized, though I have still some suspicion that the steam was not fully examined, and I think the experiment should be repeated. Whether the first state of electrized clouds is positive or negative, if I could find the cause of that, I should be at no loss about the other; for either is easily deduced from the other, as one state is easily produced by the other. A strongly positive cloud may drive out of a neighbouring

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cloud much of its natural quantity of the electric fluid, and, passing by it, leave it in a negative state. In the same way, a strongly negative cloud may occasion a neighbouring cloud to draw into itself from others an additional quantity, and, passing by it, leave it in a positive state. How these effects may be produced, you will easily conceive, on perusing and considering the experiments in the enclosed paper; and from them too it appears probable, that every change from positive to negative, and from negative to positive, that, during a thunder-gust, we see in the cork balls annexed to the apparatus, is not owing to the presence of clouds in the same state, but often to the absence of positive or negative clouds, that, having just passed, leave the rod in the opposite state.

The knocking down of the six men was performed with two of my large jars not fully charged. I laid one end of my discharging-rod upon the head of the first; he laid his hand on the head of the second; the second his hand on the head of the third, and so to the last, who held in his hand the chain that was connected with the outside of the jars. When they were thus placed, I applied the other end of my rod to the prime conductor, and they all dropped together. When they got up, they all declared they had not felt any stroke, and wondered how they came to fall; nor did any of them either hear the crack, or see the light of it. You suppose it a dangerous experiment; but I had once suffered the same myself, receiving, by accident, an equal stroke through my head, that struck me down, without hurting me.

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And I had seen a young woman, that was about to be electrified through the feet (for some indisposition) receive a greater charge through the head, by inadvertently stooping forward to look at the placing of her feet, till her forehead (as she was very tall) came too near my prime conductor; she dropped, but instantly got up again, complaining of nothing. A person so struck, sinks down doubled, or folded together, as it were, the joints losing their strength and stiffness at once, so that he drops on the spot where he stood, instantly, and there is no previous staggering, nor does he ever fall lengthwise. Too great a charge might, indeed, kill a man, but I have not yet seen any hurt done by it. It would certainly, as you observe, be the easiest of all deaths.

The experiment you have heard so imperfect an account of, is merely this: I electrified a silver pint can, on an electric stand, and then lowered into it a cork ball, of about an inch diameter, hanging by a silk string, till the cork touched the bottom of the can. The cork was not attracted to the inside of the can, as it would have been to the outside; and, though it touched the bottom, yet, when drawn out, it was not found to be electrified by that touch, as it would have been by touching the outside. The fact is singular. You require the reason; I do not know it. Perhaps you may discover it, and then you will be so good as to communicate it to me.[1] I

[1] Mr. Franklin has since thought, that possibly the mutual repulsion of the inner opposite sides of the electrical can may prevent the accumulating an electric atmosphere upon them, and occasion it to stand chiefly on the outside; but recommends it to the farther examination of the curious.

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find a frank acknowledgment of one's ignorance is, not only the easiest way to get rid of a difficulty, but the likeliest way to obtain information, and therefore I practise it; I think it an honest policy. Those who affect to be thought to know every thing, and so undertake to explain every thing, often remain long ignorant of many things that others could and would instruct them in, if they appeared less conceited.

The treatment your friend has met with is so common, that no man, who knows what the world is and ever has been, should expect to escape it. There are everywhere a number of people, who, being totally destitute of any inventive faculty themselves, do not readily conceive that others may possess it; they think of inventions as of miracles; there might be such formerly, but they are ceased. With these, every one who offers a new invention is deemed a pretender; he had it from some other country, or from some book; a man of *their own acquaintance*, one who has no more sense than themselves, could not possibly, in their opinion, have been the inventor of any thing. They are confirmed, too, in these sentiments, by frequent instances of pretensions to invention, which vanity is daily producing. That vanity, too, though an incitement to invention, is, at the same time, the pest of inventors. Jealousy and envy deny the merit or the novelty of your invention; but vanity, when the novelty and merit are established, claims it for its own. The smaller your invention is, the more mortification you receive in having the credit of it disputed with you by a rival,

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whom the jealousy and envy of others are ready to support against you, at least so far as to make the point doubtful. It is not in itself of importance enough for a dispute; no one would think your proofs and reasons worth their attention; and yet, if you do not dispute the point, and demonstrate your right, you not only lose the credit of being in that instance *ingenious*, but you suffer the disgrace of not being *ingenuous;* not only of being a plagiary, but of being plagiary for trifles. Had the invention been greater, it would have disgraced you less; for men have not so contemptible an idea of him that robs for gold on the highway, as of him that can pick pockets for half-pence and farthings. Thus, through envy, jealousy, and the vanity of competitors for fame, the origin of many of the most extraordinary inventions, though produced within but a few centuries past, is involved in doubt and uncertainty. We scarce know to whom we are indebted for the *compass*, and *spectacles*, nor have even *paper* and *printing*, that record every thing else, been able to preserve with certainty the name and reputation of their inventors. One would not, therefore, of all faculties or qualities of the mind, wish, for a friend or a child, that he should have that of invention. For his attempts to benefit mankind in that way, however well imagined, if they do not succeed, expose him, though very unjustly, to general ridicule and contempt; and, if they do succeed, to envy, robbery, and abuse.

I am, &c.,

B. FRANKLIN.

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CXVII

TO M. DALIBARD, AT PARIS, ENCLOSED IN A LETTER TO PETER COLLINSON

READ AT THE ROYAL SOCIETY, DECEMBER 18, 1755

PHILADELPHIA, 29 June, 1755.

SIR:—You desire my opinion of Père Beccaria's Italian book.[1] I have read it with much pleasure, and think it one of the best pieces on the subject that I have seen in any language. Yet, as to the article of *Water-spouts*, I am not at present of his sentiments; though I must own, with you, that he has handled it very ingeniously. Mr. Collinson has my opinion of whirlwinds and water-spouts at large, written some time since. I know not whether they will be published; if not, I will get them transcribed for your perusal.[2] It does not appear to me that Père Beccaria doubts of the *absolute impermeability of glass* in the sense I mean it; for the instances he gives of holes made through glass, by the electric stroke, are such as we have all experienced, and only show that the electric fluid could not pass without making a hole. In the same manner we say glass is impermeable to water, and yet a stream from a fire-engine will force through the strongest

[1] This work is written, conformably to Mr. Franklin's theory, upon artificial and natural electricity, which compose the two parts of it. It was printed in Italian, at Turin, in quarto, 1753; between the two parts is a letter to the Abbé Nollet, in defence of Mr. Franklin's system. —J. BEVIS.

[2] Beccaria wrote a long letter to Franklin, dated at Turin, December 24, 1757, giving an account of several experiments made by him in electricity, illustrative of Franklin's principles. The letter, written in Latin, is contained in the *Philosophical Transactions*, vol. li., p. 514.

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panes of a window. As to the effect of points in drawing the electric matter from the clouds, and thereby securing buildings, &c., which, you say, he seems to doubt, I must own I think he only speaks modestly and judiciously. I find I have been but partly understood in that matter. I have mentioned it in several of my letters, and, except once, always in the *alternative*, viz., that pointed rods erected on buildings, and communicating with the moist earth, would either *prevent* a stroke, *or*, if not prevented, would *conduct* it, so as that the building should suffer no damage. Yet, whenever my opinion is examined in Europe, nothing is considered but the probability of those rods *preventing* a stroke or explosion, which is only a *part* of the use I proposed for them; and the other part, their conducting a stroke, which they may happen not to prevent, seems to be totally forgotten, though of equal importance and advantage.

I thank you for communicating M. de Buffon's relation of the effect of lightning at Dijon, on the 7th of June last. In return, give me leave to relate an instance I lately saw of the same kind. Being in the town of Newbury in New England, in November last, I was shown the effect of lightning on their church, which had been struck a few months before. The steeple was a square tower of wood, reaching seventy feet up from the ground to the place where the bell hung, over which rose a taper spire, of wood likewise, reaching seventy feet higher, to the vane of the weather-cock. Near the bell was fixed an iron hammer to strike the hours; and from the tail of the

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hammer a wire went down through a small gimlet-hole in the floor that the bell stood upon, and through a second floor in like manner; then horizontally under and near the plastered ceiling of that second floor, till it came near a plastered wall; then down by the side of that wall to a clock, which stood about twenty feet below the bell. The wire was not bigger than a common knitting-needle. The spire was split all to pieces by the lightning, and the parts flung in all directions over the square in which the church stood, so that nothing remained above the bell.

The lightning passed between the hammer and the clock in the abovementioned wire, without hurting either of the floors, or having any effect upon them (except making the gimlet-holes, through which the wire passed, a little bigger), and without hurting the plastered wall, ar any part of the building, so far as the aforesaid wire and the pendulum-wire of the clock extended; which latter wire was about the thickness of a goose-quill. From the end of the pendulum, down quite to the ground, the building was exceedingly rent and damaged, and some stones in the foundation-wall torn out, and thrown to the distance of twenty or thirty feet. No part of the aforementioned long, small wire, between the clock and the hammer, could be found, except about two inches that hung to the tail of the hammer, and about as much that was fastened to the clock; the rest being exploded, and its particles dissipated in smoke and air, as gun-powder is by common fire, and had only left a black smutty track on the plastering, three or four

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inches broad, darkest in the middle, and fainter towards the edges, all along the ceiling, under which it passed, and down the wall. These were the effects and appearances; on which I would only make the following remarks, viz.

1. That lightning, in its passage through a building, will leave wood to pass as far as it can in metal, and not enter the wood again till the conductor of metal ceases.

And the same I have observed in other instances, as to walls of brick or stone.

2. The quantity of lightning that passed through this steeple must have been very great, by its effects on the lofty spire above the bell, and on the square tower, all below the end of the clock-pedulum.

3. Great as this quantity was, it was conducted by a small wire and a clock-pendulum, without the least damage to the building so far as they extended.

4. The pendulum rod, being of a sufficient thickness, conducted the lightning without damage to itself; but the small wire was utterly destroyed.

5. Though the small wire was itself destroyed, yet it had conducted the lightning with safety to the building.

6. And from the whole it seems probable that if even such a small wire had been extended from the spindle of the vane to the earth, before the storm, no damage would have been done to the steeple by that stroke of lightning, though the wire itself had been destroyed.

B. Franklin.

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CXVIII

TO PETER COLLINSON

PHILADELPHIA, 25 August, 1755.

DEAR SIR:—As you have my former papers on whirlwinds, &c., I now send you an account of one which I had lately an opportunity of seeing and examining myself.

Being in Maryland, riding with Colonel Tasker, and some other gentlemen, to his country-seat, where I and my son were entertained by that amiable and worthy man with great hospitality and kindness, we saw, in the vale below us, a small whirlwind beginning in the road, and showing itself by the dust it raised and contained. It appeared in the form of a sugar-loaf, spinning on its point, moving up the hill toward us, and enlarging as it came forward. When it passed by us, its smaller part near the ground appeared no bigger than a common barrel; but, widening upwards, it seemed, at forty or fifty feet high, to be twenty or thirty feet in diameter. The rest of the company stood looking after it; but, my curiosity being stronger, I followed it, riding close by its side, and observed its licking up, in its progress, all the dust that was under its smaller part. As it is a common opinion that a shot, fired through a water-spout, will break it, I tried to break this little whirlwind, by striking my whip frequently through it, but without any effect. Soon after, it quitted the road and took into the woods, growing every moment larger and stronger, raising, instead of dust, the old dry leaves with which the ground was thick covered, and making

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a great noise with them and the branches of the trees, bending some tall trees round in a circle swiftly and very surprisingly, though the progressive motion of the whirl was not so swift but that a man on foot might have kept pace with it; but the circular motion was amazingly rapid. By the leaves it was now filled with, I could plainly perceive that the current of air they were driven by moved upwards in a spiral line; and when I saw the passing whirl continue entire, after leaving the trunks and bodies of large trees which it had enveloped, I no longer wondered that my whip had no effect on it in its smaller state. I accompanied it about three quarters of a mile, till some limbs of dead trees, broken off by the whirl, flying about and falling near me, made me more apprehensive of danger; and then I stopped, looking at the top of it as it went on, which was visible, by means of the leaves contained in it, for a very great height above the trees. Many of the leaves, as they got loose from the upper and widest part, were scattered in the wind; but so great was their height in the air, that they appeared no bigger than flies. My son, who was by this time come up with me, followed the whirlwind till it left the woods, and crossed an old tobacco-field, where, finding neither dust nor leaves to take up, it gradually became invisible below, as it went away over the field. The course of the general wind then blowing was along with us as we travelled, and the progressive motion of the whirlwind was in a direction nearly opposite, though it did not keep a straight line, nor was its progressive motion uniform, it making little sallies on either hand as

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it went, proceeding sometimes faster and sometimes slower, and seeming sometimes for a few seconds almost stationary, then starting forward pretty fast again. When we rejoined the company, they were admiring the vast height of the leaves now brought by the common wind over our heads. These leaves accompanied us as we travelled, some falling now and then round about us, and some not reaching the ground till we had gone near three miles from the place where we first saw the whirlwind begin. Upon my asking Colonel Tasker if such whirlwinds were common in Maryland, he answered pleasantly: "No, not at all common; but we got this on purpose to treat Mr. Franklin." And a very high treat it was to,

Dear Sir,

Your affectionate friend and humble servant,

B. FRANKLIN.

CXIX

TO JARED ELIOT

PHILADELPHIA, 31 August, 1755.

DEAR FRIEND:—I have been employed almost all this summer in the service of an unfortunate army, and other public affairs, that have brought me greatly in arrear with my correspondents. I have lost the pleasure of conversing with them, and I have lost my labor. I wish these were the only losses of the year; but we have lost a number of brave men, and all our credit with the Indians. I fear these losses may soon be productive of more and greater.

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I have had no opportunity of making the inquiry you desired relating to Leonard. Somerset County in Maryland is one hundred and fifty miles from hence, and out of the common road of travellers or the post; nor have I any correspondent or acquaintance there. But now, while I am writing, I recollect a friend I have at Newtown, within fifty miles of Somerset, who has a very general knowledge of those parts and of the people, as he practises the law in all the counties on the Eastern Shore of Maryland. I will immediately write to him about it.

I am sorry your newspapers miscarry. If your riders are not more careful I must order them to be changed. The Mitchell, who made the map, is our Dr. Mitchell. I send you one of Evans's new maps, which I imagine will be agreeable to you. Please to accept it. I am glad to hear your son has acquired the art of making steel. I hope it will prove profitable. Mr. Roberts is pleased that you so kindly accept his fork and rake. I suppose he will write to you; but he is a man of much business, and does not love writing. I shall learn once more (for he told me once and I have forgotten it) how those teeth are put in and send you word; but perhaps our friend Bartram can tell you. He delivers you this, and I need not recommend him to you, for you are already acquainted with his merit, though not with his face and person. You will have a great deal of pleasure in one another's conversation. I wish I could be within hearing, but that cannot be. He is upon one of his rambles in search of knowledge, and intends to view both your sea-coast and back country.

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Remember me kindly to Mr. Tufts and Mr. Ruggles when you see them. My respects to your good lady and family. With the greatest esteem, I am, dear Sir, your most affectionate, &c.,

B. FRANKLIN.

CXX

TO JARED ELIOT

PHILADELPHIA, 1 September, 1755.

DEAR SIR:—I wrote to you yesterday, and now I write again. You will say, *It can't rain, but it pours;* for I not only send you *manuscript* but *living* letters. The *former* may be short, but the *latter* will be longer and yet more agreeable. Mr. Bartram, I believe you will find to be at least twenty folio pages, large paper well filled, on the subjects of botany, fossils, husbandry, and the first creation. This Mr. Allison is as many or more on agriculture, philosophy, your own catholic divinity, and various other points of learning equally useful and engaging. Read them both. It will take you at least a week; and then answer by sending me two of the like kind, or by coming yourself. If you fail of this, I shall think I have overbalanced my epistolary account, and that you will be in my debt as a correspondent for at least twelve months to come.

I remember with pleasure the cheerful hours I enjoyed last winter in your company, and would with all my heart give any ten of the thick old folios that stand on the shelves before me for a *little book* of the

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stories you then told with so much propriety and humor. Adieu, my dear friend, and believe me ever yours affectionately, B. FRANKLIN.

CXXI

TO MISS CATHERINE RAY

PHILADELPHIA, 11 September, 1755.

Begone, business, for an hour, at least, and let me chat a little with my Katy.

I have now before me, my dear girl, three of your favors, viz., of March the 3d, March the 30th, and May the 1st. The first I received just before I set out on a long journey, and the others while I was on that journey, which held me near six weeks. Since my return I have been in such a perpetual hurry of public affairs of various kinds, as renders it impracticable for me to keep up my private correspondences, even those that afforded me the greatest pleasure.

You ask in your last how I do, and what I am doing, and whether everybody loves me yet, and why I make them do so.

In regard to the first, I can say, thanks to God, that I do not remember I was ever better. I still relish all the pleasures of life that a temperate man can in reason desire, and through favor I have them all in my power. This happy situation shall continue as long as God pleases, who knows what is best for his creatures, and I hope will enable me to bear with

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patience and dutiful submission any change he may think fit to make that is less agreeable. As to the second question, I must confess (but don't you be jealous) that many more people love me now than ever did before; for since I saw you I have been enabled to do some general services to the country and to the army, for which both have thanked and praised me, and say they love me. They say so, as you used to do; and if I were to ask any favors of them, they would, perhaps, as readily refuse me; so that I find little real advantage in being beloved, but it pleases my humor.

Now it is near four months since I have been favored with a single line from you; but I will not be angry with you, because it is my fault. I ran in debt to you three or four letters, and, as I did not pay, you would not trust me any more, and you had some reason. But, believe me, I am honest, and, though I should never make equal returns, you shall see I will keep fair accounts. Equal returns I can never make, though I should write to you by every post; for the pleasure I receive from one of yours is more than you can have from two of mine. The small news, the domestic occurrences among our friends, the natural pictures you draw of persons, the sensible observations and reflections you make, and the easy, chatty manner in which you express every thing, all contribute to heighten the pleasure; and the more as they remind me of those hours and miles that we talked away so agreeably, even in a winter journey, a wrong road, and a soaking shower.

I long to hear whether you have continued ever

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since in that monastery[1]; or have broke into the world again, doing petty mischief; how the lady Wards do, and how many of them are married, or about it; what is become of Mr. B—— and Mr. L—— and what the state of your heart is at this instant? But that, perhaps, I ought not to know; and, therefore, I will not conjure, as you sometimes say I do. If I could conjure, it should be to know what was that *oddest question about me that ever was thought of*, which you tell me a lady had just sent to ask you.

I commend your prudent resolutions, in the article of granting favors to lovers. But if I were courting you, I could not hardly approve such conduct. I should even be malicious enough to say you were too *knowing*, and tell you the old story of The Girl and the Miller. I enclose you the songs you write for, and with them your Spanish letter with a translation. I honor that honest Spaniard for loving you. It showed the goodness of his taste and judgment. But you must forget him, and bless some worthy young Englishman.

You have spun a long thread, five thousand and twenty-two yards. It will reach almost from Rhode Island hither. I wish I had hold of one end of it, to pull you to me. But you would break it rather than come. The cords of love and friendship are longer and stronger, and in times past have drawn me farther; even back from England to Philadelphia. I guess that some of the same kind will one day draw you out of that Island.

I was extremely pleased with the ——— you sent

[1] Block Island.

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me. The Irish people, who have seen it, say it is the right sort; but I cannot learn that we have any thing like it here. The cheeses, particularly one of them, were excellent. All our friends have tasted it, and all agree that it exceeds any English cheese they ever tasted. Mrs. Franklin was very proud, that a young lady should have so much regard for her old husband, as to send him such a present. We talk of you every time it comes to table. She is sure you are a sensible girl, and a notable housewife, and talks of bequeathing me to you as a legacy; but I ought to wish you a better, and hope she will live these hundred years; for we are grown old together, and if she has any faults, I am so used to them that I don't perceive them; as the song says,

"Some faults we have all, and so has my Joan,
But then they 're exceedingly small;
And, now I 'm grown used to them, so like my own,
I scarcely can see them at all;
My dear friends,
I scarcely can see them at all." [1]

[1] The author here quotes a stanza from one of his own "Songs," written for the Junto. It has been printed in Professor McVickar's *Life of Dr. Samuel Bard.*

MY PLAIN COUNTRY JOAN; A SONG

"Of their Chloes and Phyllises poets may prate,
I sing my plain country Joan,
These twelve years my wife, still the joy of my life,
Blest day that I made her my own.

"Not a word of her face, of her shape, or her air,
Or of flames, or of darts, you shall hear;
I beauty admire, but virtue I prize,
That fades not in seventy year.

"Am I loaded with care, she takes off a large share,
That the burden ne'er makes me to reel;

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Indeed, I begin to think she has none, as I think of you. And since she is willing I should love you, as much as you are willing to be loved by me, let us join in wishing the old lady a long life and a happy.

With her respectful compliments to you, to your good mother and sisters, present mine, though unknown; and believe me to be, dear girl, your affectionate friend and humble servant,

B. FRANKLIN.

P. S.—Sally says: "Papa, my love to Miss Katy." If it was not quite unreasonable, I should desire you to write to me every post, whether you hear from me or not. As to your spelling, don't let those laughing girls put you out of conceit with it. It is the best in the world, for every letter of it stands for something.

Does good fortune arrive, the joy of my wife
Quite doubles the pleasure I feel.

"She defends my good name, even when I'm to blame,
Firm friend as to man e'er was given;
Her compassionate breast feels for all the distressed,
Which draws down more blessings from heaven.

"In health a companion delightful and dear,
Still easy, engaging, and free;
In sickness no less than the carefulest nurse,
As tender as tender can be.

"In peace and good order my household she guides,
Right careful to save what I gain;
Yet cheerfully spends, and smiles on the friends
I've the pleasure to entertain.

"Some faults have we all, and so has my Joan,
But then they're exceedingly small,
And, now I'm grown used to them, so like my own
I scarcely can see them at all.

"Were the finest young princess, with millions in purse,
To be had in exchange for my Joan,
I could not get better wife, might get a worse.
So I'll stick to my dearest old Joan."

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CXXII

TO WILLIAM SHIRLEY

PHILADELPHIA, 23 October, 1755.

SIR:—I beg leave to return your Excellency my most sincere and hearty thanks for your letter of the 17th of September, with the orders for the payment of wagon owners, and an extract of your orders to Colonel Dunbar, forbidding the enlistment of servants and apprentices.[1] Acts of justice so readily done become great favors, which I hope will be ever gratefully acknowledged by this people in actions as well as words.

I have also your favor of the 5th instant. Governor

[1] At this time General Shirley was Governor of Massachusetts. He was with the army at Oswego, as commander-in-chief of his Majesty's forces in America. It appears, that he never entirely fulfilled the good intentions expressed in his letter. In his autobiography, Dr. Franklin gives a particular account of the services he rendered to General Braddock, in procuring horses and wagons for his expedition. He expended, of his own money, upwards of a thousand pounds sterling. This sum was in part returned by General Braddock, but the remainder was never paid. When Lord Loudoun succeeded General Shirley, the accounts were examined and compared with the vouchers by the proper officer, and certified to be right; but Lord Loudoun declined giving an order on the paymaster for the balance, stating as a reason, that he preferred not to mix up his accounts with those of his predecessors; and, as Franklin was then on the point of departing for England, he referred him to the treasury in London, where, he said, payment would immediately be made. The application to the treasury, however, was unsuccessful. The closing paragraph of the Governor's letter ran as follows:

"Though I am at present engaged in a great hurry of business, being to move from hence in a very few days for Niagara, I cannot conclude without assuring you that I have the highest sense of your public services in general, and particularly that of engaging those wagons, without which General Braddock, could not have proceeded. I am, with great esteem, &c.,

"W. SHIRLEY."

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Morris is gone to Newcastle, to meet the Assembly of the Lower Counties, so that I cannot at present see the papers you refer me to, but I shall wait upon him in my journey to Virginia; and if, on perusing those papers, any thing seeming worthy of your notice should occur to me, I shall communicate my sentiments to you with that honest freedom which you always approve.

This journey, which I cannot now avoid, will deprive me of the pleasure of waiting on your Excellency in New York at the time you mention. I hear, too, that the governor does not purpose to send any commissioners thither, but to go himself. I know not what is to be the particular subject of your consultations; but as I believe all your schemes have the King's service (which is the public good) in view, I cannot but wish them success.

Our Assembly meets the beginning of December, when I hope to be at home again; and if any assistance is to be required of them and the people here, depend on my faithful services, so far as my little sphere of influence shall extend. With the highest esteem and respect, I have the honor to be, &c.,

B. FRANKLIN.

CXXIII

TO JAMES READ

PHILADELPHIA, 2 November, 1755.

DEAR SIR:—I have your letter by Mr. Sea, and one just now by express. I am glad to hear the

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arms are well got up; they are the best that we could procure. I wish they were better; but they are well fortified, will bear a good charge, and I should imagine they would do good service with swan or buck shot, if not so fit for single ball. I have been ill these eight days, confined to my room and bed most of the time, but am now getting better. I have, however, done what I could in sending about to purchase arms, &c., for the supply of the frontiers, and can now spare you fifty more, which I shall send up to-morrow with some flints, lead, swan-shot, and a barrel of gunpowder. The arms will be under your care and Mr. Weiser's,[1] you being gentlemen in commission from the governor. Keep an account of whose hands you put them into. Let them be prudent, sober, careful men, such as will not rashly hurt our friends with them, and such as will honestly return them when peace shall be happily restored.

I sincerely commiserate the distress of your out settlers. The Assembly sit to-morrow, and there is no room to doubt of their hearty endeavours to do every thing necessary for the country's safety. I wish the same disposition may be found in the governor, and I hope it. I have put off my journey to Virginia, and you may depend on my best services for the common welfare, so far as my little influence extends. I am your affectionate kinsman and humble servant.

B. FRANKLIN.

[1] Conrad Weiser, celebrated as an Indian interpreter for many years, highly respected for his character, and of great influence with the Indians.

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P. S.—My best respects to Mr. Weiser. Nine hundred arms with ammunition have been sent up by the Committee of Assembly to different parts of the frontier.

CXXIV

AN ACT [1]

FOR THE BETTER ORDERING AND REGULATING SUCH AS ARE WILLING AND DESIROUS TO BE UNITED FOR MILITARY PURPOSES IN PENNSYLVANIA.

Whereas this province was first settled by (and a majority of the Assemblies have ever since been of) the people called Quakers, who, though they do not, as the world is now circumstanced, condemn the use of arms in others, yet are principled against bearing arms themselves; and to make any law to compel them thereto against their consciences, would be not only to violate a fundamental in our constitution, and be a direct breach of our charter of privileges, but would also in effect be to commence persecution against all that part of the inhabitants of the province; and for them by any law to compel others to

[1] The defeat of General Braddock at the battle of the Monongahela, on the 9th of July, 1755, had filled the people of Pennsylvania with alarm. The Assembly at its next session made a large grant in money for purposes of defence. The doctrine of non-resistance, which was a part of the creed of a large portion of the population, had hitherto prevented the establishment of any efficient militia system. To meet the crisis, Franklin drew up the following act for embodying and disciplining a voluntary militia. It was carried through the House, he says, without much difficulty, because care had been taken to leave the Quakers at liberty.

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bear arms, and exempt themselves, would be inconsistent and partial; yet forasmuch as, by the general toleration and equity of our laws, great numbers of people of other religious denominations are come among us, who are under no such restraint, some of whom have been disciplined in the art of war, and conscientiously think it their duty to fight in defence of their country, their wives, their families, and estates, and such have an equal right to liberty of conscience with others; and whereas a great number of petitions from the several counties of this province have been presented to this House, setting forth that the petitioners are very willing to defend themselves and their country, and desirous of being formed into regular bodies for that purpose, instructed and disciplined under proper officers with suitable and legal authority; representing withal, that unless measures of this kind are taken, so as to unite them together, subject them to due command, and thereby give them confidence in each other, they cannot assemble to oppose the enemy without the utmost danger of exposing themselves to confusion and destruction;

And whereas the voluntary assembling of great bodies of armed men from different parts of the province on any occasional alarm, whether true or false, as of late hath happened, without call or authority from the government, and without due order and direction among themselves, may be attended with danger to our neighbouring Indian friends and allies, as well as to the internal peace of the province;

And whereas the governor hath frequently recom-

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mended it to the Assembly, that, in preparing and passing a law for such purposes, they should have a due regard for scrupulous and tender consciences, which cannot be done where compulsive means are used to force men into military service; therefore, as we represent all the people of the province, and are composed of members of different religious persuasions, we do not think it reasonable that any should, through a want of legal powers, be in the least restrained from doing what they judge it their duty to do for their own security and the public good; we, in compliance with the said petitions and recommendations, do offer it to the governor to be enacted, and be it enacted by the Honorable Robert Hunter Morris, with the King's royal approbation lieutenant-governor, under Thomas Penn and Richard Penn, true and absolute proprietors of the province of Pennsylvania, and of the counties of Newcastle, Kent, and Sussex, upon Delaware, by and with the advice and consent of the representatives of the freemen of the said province in General Assembly met, and by the authority of the same, that, from and after the publication of this act, it shall and may be lawful for the freemen of this province to form themselves into companies, as heretofore they have used in time of war without law, and for each company, by majority of votes in the way of ballot, to choose its own officers, to wit, a captain, lieutenant, and ensign, and present them to the governor or commander-in-chief for the time being for his approbation; which officers so chosen, if approved and commissioned by him, shall be the captain, lieutenant,

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and ensign of each company respectively, according to their commissions; and the said companies being divided into regiments by the governor or commander-in-chief, it shall and may be lawful for the officers so chosen and commissioned for the several companies of each regiment to meet together, and by majority of votes, in the way of ballot, to choose a colonel, lieutenant-colonel, and major for the regiment, and present them to the governor or commander-in-chief for his approbation; which officers so chosen, if approved and commissioned by him, shall be the colonel, lieutenant-colonel, and major of the regiment, according to their commissions, during the continuance of this act.

Provided always, that if the governor or commander-in-chief shall not think fit to grant his commission to any officer so first chosen and presented, it shall and may be lawful for the electors of such officer to choose two other persons in his stead, and present them to the governor or commander-in-chief, one of whom, at his pleasure, shall receive his commission, and be the officer as aforesaid.

And be it further enacted by the authority aforesaid, that as soon as the said companies and regiments are formed, and their officers commissioned as aforesaid, it shall and may be lawful to and for the governor or commander-in-chief, by and with the advice and consent of the colonels, lieutenant-colonels, and majors of all the regiments, being for that purpose by him called and convened, or by and with the advice and consent of a majority of the said officers that shall be met and present together on

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such call, to form, make, and establish articles of war, for the better government of the forces that shall be under their command, and for bringing offenders against the same to justice, and to erect and constitute courts-martial, with power to hear, try, and determine any crimes or offences by such articles of war, and inflict penalties by sentence or judgment of the same on those who shall be subject thereto in any place within this province. Which articles of war, when made as aforesaid, shall be printed and distributed to the captains of the several companies, and by them distinctly read to their respective companies; and all and every captain, lieutenant, ensign, or other freeman who shall, after at least three days' consideration of the said articles, voluntarily sign the same, in presence of some one justice of the peace, acknowledging his having perused or heard the same distinctly read, and that he has well considered thereof, and is willing to be bound and governed thereby, and promises obedience thereto, and to his officers accordingly, shall henceforth be deemed well and duly bound to the observance of the said articles, and to the duties thereby required, and subject to the pains, penalties, punishments, and forfeitures that may therein be appointed for disobedience and other offences.

Provided always that the articles, so to be made and established, shall contain nothing repugnant, but be as near as possible conformable, to the military laws of Great Britain, and to the articles of war made and established by his Majesty in pursuance of the last act of Parliament for punishing

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mutiny and desertion, the different circumstances of this province compared with Great Britain, and of a voluntary militia of freemen compared with mercenary standing troops, being duly weighed and maturely considered.

Provided, also, that nothing in this act shall be understood or construed to give any power or authority to the governor or commander-in-chief, and the said officers, to make any articles or rules that shall in the least affect those of the inhabitants of the province who are conscientiously scrupulous of bearing arms, either in their liberties, persons, or estates; nor any other persons of what persuasion or denomination soever, who have not first voluntarily and freely signed the said articles after due consideration as aforesaid.

Provided, also, that no youth under the age of twenty-one years, nor any bought servant or indented apprentice, shall be admitted to enroll himself, or be capable of being enrolled, in the said companies or regiments, without the consent of his or their parents or guardians, masters or mistresses, in writing, under their hands first had and obtained.

Provided, also, that no enlistment or enrolment of any person in any of the companies or regiments to be formed and raised as aforesaid, shall protect such person in any suit or civil action brought against him by his creditors or others, except during his being in actual service in field or garrison; nor from a prosecution for any offence committed against the laws of this province.

Provided, also, that no regiment, company, or

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party of volunteers shall, by virtue of this act, be compelled or led more than three days' march beyond the inhabited parts of the province; nor detained longer than three weeks in any garrison, without an express engagement for that purpose, first voluntarily entered into and subscribed by every man so to march or remain in garrison.

This act to continue in force until the 30th day of October next, and no longer.

CXXV

TO WILLIAM PARSONS [1]

PHILADELPHIA, 5 December, 1755.

DEAR SIR:—I received your favor of November 25th, and take this first opportunity of acquainting you, that an act is passed granting £60,000 chiefly for the defence of the province, and is to be disposed of for that purpose, by seven persons, namely, Isaac Norris, James Hamilton, J. Mifflin, Joseph Fox, Evan Morgan, John Hughes, and your old friend. We meet every day, Sundays not excepted, and have a good agreement with the governor. Three hundred men are ordered to be immediately raised on pay, to range the frontiers, and blockhouses for stages to be erected at proper distances and garrisoned; so that I hope in a little time to see things in a better posture. A militia act is also passed, of which, if people are well disposed, a good use may

[1] William Parsons was one of the earliest members of the *Junto*, formed by Franklin soon after he established himself in Philadelphia. He was afterwards Surveyor-General of Pennsylvania. When this letter was written he was at Easton. He died in 1758.

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be made, and bodies of men be ready on any occasion to assist and support the rangers. All parties laid aside, let you and I use our influence to carry this act into execution.

I received also your letter of the 27th, relating the unhappy affair of Gnadenhutten, and desiring arms. I have accordingly procured and sent up by a wagon to one George Overpack's, a chest of arms containing fifty, and five loose, fifty-five in all, of which twenty-five are for Easton, and thirty to be disposed of to such persons nearest danger on the frontiers, who are without arms and unable to buy, as yourself with Messrs. Atkins and Martin may judge most proper; letting all know that the arms are only lent for their defence, that they belong to the public, and must be held forthcoming when the government shall demand them, for which each man should give his note. By the same wagon we send twenty-five guns for Lehigh township, and ten for Bethlehem to the Moravian Brethren, which make in all one hundred; with which goes one hundred weight of gunpowder, and four hundred pounds of lead; so there should be one pound of powder and four pounds of lead divided to each man.

Who brought your last letter to me I know not, it being left at my house. You mention sending a wagon, and I daily expected to see the wagoner, but he never called on me for an answer. Please let me know by a line when you have received what is sent. I am your affectionate friend and humble servant,

B. Franklin.

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CXXVI

TO WILLIAM PARSONS

PHILADELPHIA, 15 December, 1755.

DEAR FRIEND:—We received yours of the 13th. You will before this time have received the arms and ammunition, blankets, &c., sent up for an intended ranging party. They may be made use of for the defence of your town till we arrive. Captain Trump, from Upper Dublin, marches the day after to-morrow with fifty men to your assistance. The provisions for their use go with them, so that they will not burden you. Orders are gone to Captains Aston and Wayne to march also with their companies immediately. They will remain on your frontier two or three months, till they can be relieved by others.[1]

Mr. Hamilton and myself will set out on Thursday to visit you, and erect blockhouses in proper places.

[1] Franklin was extremely active in providing for the defence of the frontiers, as well by his personal efforts, as in the capacity of one of the commissioners for that purpose. The following memoranda were found by Mr. Duane among Franklin's papers:

"*Considerations to be taken.*

"What number of men?

"Should the post be fortified, and in what manner?

"How long to be continued there?

"Could they not be partly employed in raising their own provisions?

"Could they have some lots of land assigned them for their encouragement?

"What their pay; and from what funds?

"How much the annual expense?

"Is it certain that the late method of giving rewards for apprehending rioters will be effectual?

"To whom does the land belong?"

In one of his letters he said: "The fifty arms now sent are all furnished with staples for sling straps, that, if the governor should order a troop or company of rangers on horseback, the pieces may be slung at the horsemen's backs. A party on the scout should observe several

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Think of suitable officers for raising and commanding men to be kept in the province pay; for Mr. Hamilton does not know the people your way, nor do I know whom to recommend. He will bring some blank commissions with him. I enclose you twenty pounds towards buying meal and meat for the poor fugitives that take refuge with you. Be of good courage, and God guide you. Your friends will never desert you. I am yours affectionately,

B. FRANKLIN.

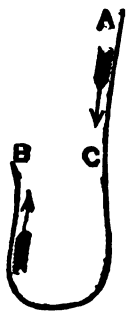
CXXVII

A DIALOGUE [1]

BETWEEN X, Y, & Z, CONCERNING THE PRESENT STATE OF AFFAIRS IN PENNSYLVANIA.

X. Your servant, Gentlemen; I am glad to see you at my house. Is there any thing new to-day?

rules to avoid being tracked and surprised in their encampments at night. This may be done sometimes when they come to a creek or run, by entering the run and travelling up the stream or down the stream, in the water, a mile or two, and then encamp, the stream effacing the track, and the enemy at a loss to know whether the party went up or down. Suppose a party marching from *A* intends to halt at *B*, they do not go straight to *B* and stop there, but pass by at some little distance, and make a turn which brings them thither. Between *B* and *C* two or three sentinels are placed to watch the track, and give immediate notice at *B*, if they perceive any party pass by in pursuit, with an account of the number, &c., which enables the party at *B* to prepare and attack them if they judge that proper, or gives them time to escape. But I add no more of this kind, recollecting that Mr. Weiser must be much better acquainted with all these things than I am."



[1] This *Dialogue* was first printed in the *Pennsylvania Gazette*, December 18, 1755.

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Y. We have been talking of the militia act; have you seen it?

X. Yes; I have read it in the papers.

Z. And what do you think of it?

X. The more I consider it, the better I like it. It appears to me a very good act, and I am persuaded will be of good use, if heartily carried into execution.

Z. Ay, that may be; but who is to carry it into execution? It says that people may form themselves into companies, and choose their own officers; but there is neither time nor place appointed for this transaction, nor any person directed or empowered to call them together.

X. It is true; but methinks there are some words that point out the method pretty plain to willing minds. And it seems to me, that we who joined so sincerely in the petitions for a militia law, and really thought one absolutely necessary for the safety of our country, should, now we have obtained the law, rather endeavour to *explain* than *invent* difficulties in the construction of it.

Y. What are those words you mention?

X. Here is the act itself; I will read that part of it: "From and after the publication of this act, it shall and may be lawful for the freemen of this province to form themselves into companies, *as heretofore they used in time of war without law*, and for each company, by a majority of votes, in the way of ballot, to choose its own officers, &c." The words I meant are these: "*as heretofore they used in time of war.*" Now I suppose we have none of us forgot the

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association in the time of the last war; it is not so long since, but that we may well enough remember the method we took to form ourselves into companies, choose our officers, and present them to the governor for approbation and commissions; and the act in question says plainly we may now *lawfully do*, in this affair, what we then did *without law*.

Y. I did not before take so much notice of those words, but, to be sure, the thing is easy enough; for I remember very well how we managed at that time. And indeed it is easier to effect it now than it was then; for the companies and regiments, and their districts, &c., were then all to form and settle. But now why may not the officers of the old companies call the old associators together, with such others in the district of each company as incline to be concerned, and proceed immediately to a new choice by virtue of the act? Other new companies may in other places be formed, as the associated companies were.

Z. You say right. And if this were all the objection to the act, no doubt they would do so immediately. But it is said there are other faults in it.

X. What are they?

Z. The act is so loose that persons who never intended to engage in the militia, even *Quakers*, may meet and vote in the choice of the officers.

X. Possibly;—but was any such thing observed in the association elections?

Z. Not that I remember.

X. Why should it be more apprehended now than it was at that time? Can they have any mo-

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tives to such a conduct now, which they had not then?

Z. I cannot say.

X. Nor can I. If a militia be necessary for the safety of the province, I hope we shall not boggle at this little difficulty. What else is objected?

Z. I have heard this objected: That it were better the governor should appoint the officers; for, the choice being in the people, a man very unworthy to be an officer may happen to be popular enough to get himself chosen by the undiscerning mob.

X. It is possible. And if all officers appointed by governors were always men of merit, and fully qualified for their posts, it would be wrong ever to hazard a popular election. It is reasonable, I allow, that the commander-in-chief should not have officers absolutely forced upon him, in whom, from his knowledge of their incapacity, he can place no confidence. And, on the other hand, it seems likely that the people will engage more readily in the service, and face danger with more intrepidity when they are commanded by a man they know and esteem, and on whose prudence and courage, as well as good-will and integrity, they can have reliance, than they would under a man they either did not know or did not like. For, supposing governors ever so judicious and upright in the distribution of commissions, they cannot know everybody in every part of the province, and are liable to be imposed on by partial recommendations; but the people generally know their neighbours. And, to me, the act in question seems to have hit a proper medium

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between the two modes of appointing. The people choose, and if the governor approves, he grants the commission; if not, they are to choose a second, and even a third time. Out of three choices it is probable one may be right; and where an officer is approved both by superiors and inferiors, there is the greatest prospect of those advantages that attend a good agreement in the service. This mode of choice is moreover agreeable to the liberty and genius of our constitution. It is similar to the manner in which by our laws sheriffs and coroners are chosen and approved. And yet it has more regard to the prerogative than the mode of choice in some colonies, where the military officers are either chosen absolutely by the companies themselves, or by the House of Representatives, without any negative on that choice, or any approbation necessary from the governor.

Y. But is that agreeable to the English constitution?

X. Considered in this light, I think it is; British subjects, by removing into America, cultivating a wilderness, extending the dominion, and increasing the wealth, commerce, and power of their mother country at the hazard of their lives and fortunes, ought not, and in fact do not, thereby lose their native rights. There is a power in the crown to grant a continuance of those rights to such subjects in any part of the world, and to their posterity born in such new country; and for the farther encouragement and reward of such merit, to grant additional liberties and privileges, not used in England,

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but suited to the different circumstances of different colonies. If then the grants of those additional liberties and privileges may be regularly made under an English constitution, they may be enjoyed agreeably to that constitution.

Y. But the act is very short; there are numberless circumstances and occasions pertaining to a body of armed men which are not, as they ought to have been, expressly provided for in the act.

X. It is true there are not express provisions in the act for all circumstances, but there is a power lodged by the act in the governor and field-officers of the regiments to make all such provisions in the articles of war which they may form and establish.

Y. But can it be right in the legislature, by any act, to delegate their power of making laws to others?

X. I believe not, generally; but certainly in particular cases it may. Legislatures may, and frequently do, give to corporations power to make by-laws for their own government. And in this case the act of Parliament gives the power of making articles of war for the government of the army to the King alone, and there is no doubt but the Parliament understands the rights of government.

Y. Are you sure the act of Parliament gives such power?

X. This is the act. The power I mention is here in the 55th section: "Provided always, that it shall and may be lawful to and for his Majesty to form, make, and establish articles of war for the better government of his Majesty's forces, and for bringing

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offenders against the same to justice; and to erect and constitute courts-martial, with power to try, hear, and determine any crimes or offences by such articles of war, and inflict penalties by sentence or judgment of the same." And here you see, bound up with the act, the articles of war, made by his Majesty in pursuance of the act, and providing for every circumstance.

Z. It is, sure enough. I had been told that our act of Assembly was impertinently singular in this particular.

X. The governor himself, in a message to the House, expressly recommended this act of Parliament for their imitation, in forming the militia bill.

Z. I never heard that before.

X. But it is true. The Assembly, however, considering that this militia would consist chiefly of freeholders, have varied a little from that part of the act of Parliament, in favor of liberty; they have not given the sole power of making those articles of war *to the governor*, as that act does to the King; but have joined with the governor, for that purpose, a number of officers to be chosen by the people. The articles, moreover, are not to be general laws binding on all the province, nor on any man who has not first approved of them and voluntarily engaged to observe them.

Z. Is there no danger that the governor and officers may make those articles too severe?

X. Not without you can suppose them enemies to the service and to their country; for, if they should make such as are unfit for freemen and

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Englishmen to be subjected to, they will get no soldiers; nobody will engage. In some cases, however, if you and I were in actual service, I believe we should both think it necessary for our own safety, that the articles should be pretty severe.

Z. What cases are they?

X. Suppose a sentinel should betray his trust, give intelligence to the enemy, or conduct them into our quarters.

Z. To be sure there should be severe punishments for such crimes, or we might all be ruined.

X. Choose reasonable men for your officers, and you need not fear their making reasonable laws; and if they make such, I hope reasonable men will not refuse to engage under them.

Y. But here is a thing I do not like. By this act of Assembly the Quakers are neither compelled to muster nor to pay a fine if they do not.

X. It is true; nor could they be compelled either to muster or pay a fine of that kind by any militia law made here. They are exempted by the charter and fundamental laws of the province.

Y. How so?

X. See here; it is the first clause in the charter. I will read it: "Because no people can be truly happy, though under the greatest enjoyment of civil liberties, if abridged of the freedom of their consciences as to their *religious profession* and worship; and Almighty God being the only lord of conscience, father of lights and spirits, and the author as well as object of all divine knowledge, faith, and worship, who only doth enlighten the minds, and

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persuade and convince the understandings of people, I do hereby grant and declare, That no person or persons inhabiting in this province or territories, who shall confess and acknowledge one Almighty God, the creator, upholder, and ruler of the world, and profess him or themselves obliged to live quietly under the civil government, shall be, IN ANY CASE, MOLESTED OR PREJUDICED in his or their PERSON OR ESTATE because of his or their *conscientious persuasion* or practice, nor be compelled to frequent, or maintain any religious worship, place, or ministry, contrary to his or their mind, or to DO OR SUFFER ANY OTHER ACT OR THING, contrary to their religious persuasion." And, in the 8th section of the same charter, you see a declaration, that "neither the proprietor, nor his heirs or assigns, shall procure or do any thing or things whereby the liberties in this charter contained or expressed, nor any part thereof, shall be infringed or broken; and if any thing shall be procured or done by *any person or persons* contrary to these presents, it shall be held of NO FORCE OR EFFECT." This liberty of conscience, granted by charter, is also established by the first law in our book, and confirmed by the crown. And, moreover, the governor has an express instruction from the proprietaries, that, in case of making any militia law, he shall take especial care that the charter be not infringed in this respect. Besides, most of our petitions for a militia from the moderate part of the people requested particularly that due regard might be had to scrupulous and tender consciences. When taxes are raised, however, for the King's service, the

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Quakers and Menonists pay their part of them, and a great part; for, as their frugality and industry make them generally wealthy, their proportion is the greater compared with their numbers. And out of these taxes those men are paid who go into actual service. As for mustering and training, no militia are anywhere paid for that. It is by many justly delighted in, as a manly exercise. But those who are engaged in actual service for any time ought undoubtedly to have pay.

Y. There is no provision in this militia act to pay them.

X. There is a provision that no regiment, company, or party, though engaged in the militia, shall be obliged "to more than three days' march, &c., without an express engagement for that purpose, first voluntarily entered into and subscribed by every man, so to march or remain in garrison." And it is to be supposed that no man will subscribe such particular engagement without reasonable pay or other encouragement.

Y. But where is that pay to come from?

X. From the government to be sure; and out of the money struck by the act for granting £60,000.

Z. Yes; but those who serve must pay a share of the tax, as well as those who do not.

X. Perhaps not. It is to be supposed that those who engage in the service for any time, upon pay, will be chiefly single men, and they are expressly exempted from the tax by the £60,000 act. Consequently those who do not serve must pay the more for the sum granted must be made up.

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Z. I never heard before that they were exempted by that act.

X. It is so, I assure you.

Y. But there is no provision in the militia act for the maimed.

X. If they are poor, they are provided for by the laws of their country. There is no other provision by any militia law that I know of. If they have behaved well, and suffered in their country's cause, they deserve, moreover, some grateful notice of their service and some assistance from the common treasury; and if any particular township should happen to be overburthened, they may, on application to the government, reasonably expect relief.

Z. Though the Quakers and others conscientiously scrupulous of bearing arms are exempted, as you say, by charter, they might, being a majority in the Assembly, have made the law compulsory on others. At present it is so loose that nobody is obliged by it who does not voluntarily engage.

X. They might, indeed, have made the law compulsory on all others. But it seems they thought it more equitable and generous to leave to all as much liberty as they enjoy themselves, and not lay even a seeming hardship on others which they themselves decline to bear. They have, however, granted all we asked of them. Our petitions set forth that "we were freely willing and ready to defend ourselves and country, and all we wanted was legal authority, order, and discipline." These are now afforded by the law, if we think fit to make use of them. And, indeed, I do not see the advantage of compelling people of any

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sect into martial service merely for the sake of raising numbers. I have been myself in some service of danger, and I always thought cowards rather weakened than strengthened the party. Fear is contagious, and a panic once begun spreads like wildfire, and infects the stoutest heart. All men are not by nature brave; and a few who are so will do more effectual service by themselves than when accompanied by and mixed with a multitude of poltroons, who only create confusion and give advantage to the enemy.

Z. What signifies what you thought or think? Others think differently; and all the wise legislatures in the other colonies have thought fit to compel all sorts of persons to bear arms or suffer heavy penalties.

X. As you say, what I thought or think is not of much consequence. But a wiser legislator than all those you mention put together, and who better knew the nature of mankind, made his military law very different from theirs in that respect.

Z. What legislator do you mean?

X. I mean God himself, who would have no man led to battle that might rather wish to be at home, either from fear or other causes.

Z. Where do you find that law?

X. It is in the 20th chapter of *Deuteronomy*, where are these words: *When thou goest out to battle against thine enemies, the officers shall speak unto the people, saying, What man is there that hath built a new house, and hath not dedicated it? Let him go and return to his house, lest he die in the battle, and another man dedicate it. And what man is he that hath*

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planted a vineyard, and hath not yet eaten of it? Let him also go and return unto his house, lest he die in the battle, and another man eat of it. And what man is there that hath betrothed a wife, and hath not taken her? Let him go and return unto his house, lest he die in the battle, and another man take her. And—

Z. These altogether could not be many; and this has no relation to cowardice.

X. If you had not interrupted me, I was coming to that part (verse 8): *And the officers shall speak further unto the people, and they shall say, What man is there that is* FEARFUL *and* FAINT-HEARTED? *Let him go and return unto his house, lest his brethren's heart faint, as well as his heart;* that is, lest he communicate his fears, and his brave brethren catch the contagion, to the ruin of the whole army. Accordingly, we find that, under this military law, no people in the world fought more gallantly, or performed greater actions, than the Hebrew soldiery. And if you would be informed what proportion of people would be discharged by such a proclamation, you will find that matter determined by an actual experiment, made by General Gideon, as related in the 7th Chapter of Judges; for he, having assembled thirty-two thousand men against the Midianites, proclaimed, according to law (verse 3): *Whosoever is* FEARFUL *and* AFRAID, *let him return and depart early from Mount Gilead.*

Z. And pray, how many departed?

X. The text says there departed twenty-two thousand, and there remained but ten thousand men. A very great sifting! and yet on that particular occasion

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a farther sifting was required. Now it seems to me that this militia law of ours, which gives the brave all the advantages that they can desire, of order, authority, discipline, and the like, and compels no cowards into their company, is such a kind of sieve as the Mosaic proclamation. For, with us, not only every man who has built a house, or planted a vineyard, or betrothed a wife, or is afraid of his flesh, but the narrow bigot, filled with sectarian malice, if such there be, who hates Quakers more than he loves his country, his friends, his wife, or family, may say: *I will not engage, for I do not like the act;* or, *I do not like the officers that are chosen;* or, *I do not like the articles of war;* and so we shall not be troubled with them, but all that engage will be hearty.

Z. For my part, I am no coward, but hang me if I will fight to save the Quakers.

X. That is to say, you will not pump ship, because it will save the rats as well as yourself.

Y. You have answered most of the objections I have heard against the act to my satisfaction; but there is one remaining. The method of carrying it into execution seems so roundabout, I am afraid we cannot have the benefit of it in any reasonable time.

X. I cannot see much in that objection. The several neighbourhoods out of which companies are formed, may meet and choose their company officers in one and the same day; and the regiments may be formed, and field-officers chosen, in a week or ten days after, who may immediately proceed to consider the several militia laws of Britain and the colonies, and, with the governor, form out of them such

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articles as will appear most suitable for the freemen of this province, who incline to bear arms voluntarily; and the whole may be in order in a month from the first elections, if common diligence be used. And, indeed, as the colonies are at present the prize contended for between Britain and France, and the latter, by the last advices, seems to be meditating some grand blow, part of which may probably fall on Pennsylvania, either by land or sea, or both, it behoves us I think, to make the best use we can of this act, and carry it immediately into execution, both in town and country. If there are any material defects in it, experience will best discover them, and show what is proper or necessary to amend them. The approaching winter will afford us some time to arm and prepare, and more leisure, than other seasons, for exercising and improving in good discipline.

Z. But if this act should be carried into execution, prove a good one, and answer the end, what shall we have to say against the Quakers at the next election?

X. O my friends, let us on this occasion cast from us all these little party views, and consider ourselves as Englishmen and Pennsylvanians. Let us think only of the services of our King, the honor and safety of our country, and vengeance on its murdering enemies. If good be done, what imports it by whom it is done? The glory of serving and saving others is superior to the advantage of being served or secured. Let us resolutely and generously unite in our country's cause, in which to die is the sweetest of all deaths, and may the God of armies bless our honest endeavours.

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CXXVIII

TO MRS. DEBORAH FRANKLIN

EASTON, Saturday Night, 27 December, 1755.

MY DEAR CHILD:—I received with pleasure yours of the 24th, which acquainted me of your and the family's welfare. I am glad to hear that the companies are forming in town and choosing their officers, and I hope the example will be followed throughout the country. We all continue well, but much harassed with business. After many difficulties and disappointments we marched two companies yesterday over the mountains, namely, Aston's and Trump's. We wait here only for shoes, arms, and blankets, expected hourly, and then shall move toward Berks County. Our compliments to Mrs. Masters and all inquiring friends. When you write next, direct to Mr. Read's care at Reading. My duty to mother, and love to the children. I hope to find you all well at my return. My love to Mr. Hall. We have no fresh news here of mischief, to be depended on. Send the newspapers and my letters to Reading, and let me have all the little news about the X Y Z proceedings, officers, &c. I am obliged to Goody Smith for kindly remembering me. I am, with great affection, your loving husband,

B. FRANKLIN.

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CXXIX

COMMISSION FROM LIEUT.-GOVERNOR MORRIS

The Honorable Robert Hunter Morris, Esquire, Lieutenant-Governor, and Commander-in-Chief of the Province of Pennsylvania, and Counties of Newcastle, Kent, and Sussex, on Delaware, to Benjamin Franklin.

I do hereby authorize and empower you to take into your charge the County of Northampton, to dismiss all persons who have been commissioned by me to any military command, and to put others into their places; and to fill up the blank commissions herewith delivered, with the names of such persons as you shall judge fit for his Majesty's service; hereby ratifying all your acts and proceedings, done in virtue of this power; and approving the expenses accruing thereupon. And I do further order and enjoin all officers and soldiers to yield obedience to you in the execution of this power, and all magistrates, sheriffs, and others, in any kind of civil authority, and all his Majesty's liege subjects, to be aiding and assisting you in the premises. Given under my hand and seal, at Reading, this 5th day of January, 1756.[1]

ROBERT H. MORRIS.

CXXX

TO MRS. DEBORAH FRANKLIN

BETHLEHEM, 15 January, 1756.

MY DEAR CHILD:—We move this day for Gnadenhutten. If you have not cash sufficient, call upon Mr.

[1] This was a special and temporary commission; after Franklin's return, in February, he was chosen and commissioned colonel of the Philadelphia regiment.

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Moore, the treasurer, with that order of the Assembly and desire him to pay you one hundred pounds of it. If he has not cash on hand, Mr. Norris (to whom my respects) will advance it for him. We shall have with us about one hundred and thirty men, and shall endeavour to act cautiously, so as to give the enemy no advantage through our negligence. Make yourself therefore easy. Give my hearty love to all friends. I hope in a fortnight or three weeks, God willing, to see the intended line of forts finished, and then I shall make a trip to Philadelphia, and send away the lottery tickets, and pay off the prizes, though you may pay such as come to hand of those sold in Philadelphia of my signing. They were but few, the most being sold abroad; and those that sold them and received the money will pay off the prizes. I hope you have paid Mrs. Stephens for the bills. I am, my dear child, your loving husband,

B. FRANKLIN.

CXXXI

TO MRS. DEBORAH FRANKLIN

GNADENHUTTEN, 25 January, 1756.

MY DEAR CHILD:—This day week we arrived here. I wrote to you the same day, and once since. We all continue well, thanks be to God. We have been hindered with bad weather, yet our fort is in a good defensible condition, and we have every day more convenient living. Two more are to be built, one on each side of this, at about fifteen miles' distance.

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I hope both will be done in a week or ten days, and then I purpose to bend my course homewards.

We have enjoyed your roast beef, and this day began on the roast veal. All agree that they are both the best that ever were of the kind. Your citizens, that have their dinners hot and hot, know nothing of good eating. We find it in much greater perfection when the kitchen is four score miles from the dining room.

The apples are extremely welcome, and do bravely to eat after our salt pork; the minced pies are not yet come to hand, but I suppose we shall find them among the things expected up from Bethlehem on Tuesday; the capillaire is excellent, but, none of us having taken cold as yet, we have only tasted it.

As to our lodging, it is on deal featherbeds, in warm blankets, and much more comfortable than when we lodged at our inn the first night after we left home; for, the woman being about to put very damp sheets on the bed, we desired her to air them first; half an hour afterwards she told us the bed was ready, and the sheets *well aired*. I got into bed, but jumped out immediately, finding them as cold as death, and partly frozen. She had *aired* them indeed, but it was out upon the hedge. I was forced to wrap myself up in my great coat and woollen trowsers. Every thing else about the bed was shockingly dirty.

As I hope in a little time to be with you and my family, and chat things over, I now only add that I am, dear Debby, your affectionate husband,

B. Franklin.

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CXXXII

TO A FRIEND [1]

GNADENHUTTEN, 25 January, 1756.

DEAR SIR:—We got to Hays's the same evening we left you, and reviewed Craig's company by the way. Much of the next morning was spent in exchanging the bad arms for the good. Wayne's company having joined us, we that night reached Uplinger's, where we got into good quarters, and Saturday morning we began to march towards Gnadenhutten, and proceeded nearly two miles; but it seeming to set in for a rainy day, the men unprovided with great coats, and many unable to secure effectually their arms from the wet, we thought it advisable to face about, and return to our former quarters, where the men might dry themselves and lie warm; whereas, had they proceeded, they would have come in wet to Gnadenhutten, where shelter and opportunity of drying themselves that night were uncertain. In fact, it rained all day, and we were all pleased that we had not proceeded.

The next day, being Sunday, we marched hither, where we arrived about two o'clock in the afternoon, and before five had enclosed our camp with a strong breastwork musket-proof; and, with the boards brought here before by my order from Dunker's Mill, we got ourselves under some shelter from the weather. Monday was so dark, with a thick fog all day, that we could neither look out for a place to build, nor

[1] This letter was probably directed to one of the commissioners, but the name of the individual is not known.

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see where materials were to be had. Tuesday morning we looked around us, pitched on a place, and marked out our fort on the ground. By three in the afternoon the logs were all cut, and many of them hauled to the spot, the ditch dug to set them in three feet deep, and many were pointed and set up. The next day we were hindered by rain most of the day. Thursday we resumed our work, and before night were perfectly well enclosed; and on Friday morning, the stockade was finished and part of the platform within erected, which was completed next morning, when we dismissed Foulke's and Wetherhold's companies, and sent Hays down for a convoy of provisions. This day we hoisted the flag, made a general discharge of our pieces, which had been long loaded, and of our two swivels, and named the place *Fort Allen* in honor of our old friend. It is one hundred and twenty-five feet long, and fifty wide; the stockades most of them a foot thick, three feet in the ground and twelve feet out, pointed at the top.

This is an account of our week's work, which I thought might give you some satisfaction. Foulke is gone to build another fort between this and Schuylkill fort, which I hope will be finished (as Trexler is to join him) in a week or ten days, as soon as Hays returns. I shall detach another party to erect another at Surfass's, which I hope may be finished in the same time, and then I suppose end my campaign, God willing, and do myself the pleasure of seeing you on my return. I can now add no more than that I am with great esteem and affection, &c.,

B. FRANKLIN.

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CXXXIII

TO ROBERT HUNTER MORRIS, GOVERNOR OF PENNSYLVANIA

FORT ALLEN, AT GNADENHUTTEN, 26 January, 1756.

SIR:—We left Bethlehem the 16th instant, with Foulke's company forty-six men, the detachment of McLaughlin's twenty, and seven wagons laden with stores and provisions. We got that night to Hays's quarters, where Wayne's company joined us from Nazareth. The next day we marched cautiously through the gap of the mountain, a very dangerous pass, and got to Uplinger's, twenty-one miles from Bethlehem, the roads being bad and the wagons moving slowly.

This present Monday we are erecting a third house in the fort to accommodate the garrison. As soon as Captain Hays returns with the convoy of stores and provisions, which I hope may be to-morrow, I purpose to send Arndt and Hays to join Captain Trump in erecting the middle fort there, purposing to remain here between them and Foulke, ready to assist and supply both, as occasion may require; and I hope in a week or ten days, weather favoring, that those two forts may be finished, the line of forts completed and garrisoned, the rangers in motion, and the intermediate guards and watches disbanded, unless they are permitted and encouraged to go after the enemy to the Susquehanna.

At present the expense in this county is prodigious. We have on foot and in pay the following companies, viz.: Trump's, consisting of fifty men;

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Aston's, fifty; Wayne's, fifty-five; Foulke's, forty-six; Trexler's, forty-eight; and Wetherhold's, forty-four—without the Fork; Arndt's, fifty; Craig's, thirty; and Martin's, thirty—in the Irish settlements; Van Elten's, thirty—at Minisink; Hays's, forty-five; detachment of McLaughlin's, twenty; Parsons's, twenty-four—at Easton; total, five hundred and twenty-two.

This, Sir, is a particular account of our transactions, and the present state of affairs in this county. I am glad to learn, by your favor of the 21st, just received, that you have thoughts of coming to Bethlehem, as I may hope for an opportunity of waiting upon your Honor there, after our works are finished, and of communicating every thing more fully. I now only add, that I am, with dutiful respect, Sir, &c., B. FRANKLIN.[1]

[1] He wrote to Mr. Horsefield, January 25th: "Foulke with his company marches this day to build another fort between this and Fort Lebanon in the Forks of the Schuylkill. He is to be assisted by Trexler's company, and a detachment of Wetherhold's, which also leaves us this day. My son, with Hays's company and Arndt's, marches in a few days to Surfass's place (where Trump is also expected), to erect another fort between this and Fort Hamilton near Brodhead's. I purpose to remain here between them till both are finished, with Wayne and the detachment of Davis's, that I may be able to supply and assist on either side as occasion requires. This is the present state of our affairs, of which please to inform our friends, as I cannot now write to them."

Again, to Mr. Samuel Rhoads, January 26th: "We have built one pretty strong fort, and by the end of next week, or in ten days, hope to finish two more, one on each side of this, and at fifteen miles' distance. These, I suppose, will complete the projected line from Delaware to the Susquehanna. I then purpose, God willing, to return homewards, and enjoy the pleasures I promise myself, of finding my friends well."

In another letter to Mr. Horsefield, written on the 28th, he said: "I

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CXXXIV

TO MRS. DEBORAH FRANKLIN

FORT ALLEN, AT GNADENHUTTEN, 30 January, 1756.

MY DEAR CHILD:—Every other day, since we have been here, it has rained, more or less, to our no small hindrance. It rained yesterday, and now again to-day, which prevented our marching; so I will sit down half an hour to confer a little with you.

All the things you sent me, from time to time, are safely come to hand, and our living grows every day more comfortable; yet there are many things we still want, but do not send for them, as we hope our stay here will not be long.

I thought to have wrote you a long letter, but here comes in a number of people from different parts, that have business with me, and interrupt me; we have but one room, and that quite public; so I can only add, that I have just received yours, Sally's, and Grace's letters, of the 25th, with one from Mr. Hughes, and one from Mr. Thomson. Present my respects to those gentlemen (and excuse my not writing, as I have nothing material, and am much hurried), and love to all our friends and neighbours. Billy presents his duty to you, and love to his sister; all the gentlemen their compliments; they drink your health at every meal, having always something on the table to put them in mind of you.

have the pleasure to inform you, that the six wagons are just arrived, and I suppose all right, though I have not yet had time to examine the contents. There are ten Lehigh people buzzing in both ears while I write; so can only add my thanks for your care and readiness to serve the province."

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I found, among the newspapers, Mr. Shoen's bills of exchange, which should not have been sent up here; I suppose it was by mistake, and mention it, that you need not be troubled to look more for them.

I am, dear girl, your loving husband,

B. FRANKLIN.

CXXXV

TO MRS. DEBORAH FRANKLIN

FORT ALLEN, 31 January, 1756.

MY DEAR:—I wrote a line to you yesterday, and, having this opportunity, write another, just to let you know that we all continue well, and much the better for the refreshments you have sent us; in short, we do very well; for, though there are a great number of things, besides what we have, that used to seem necessary to comfortable living, yet we have learned to do without them.

Mr. Beatty is a very useful man here, and the Doctor another. Besides their services to the public, they are very agreeable companions to me. They, with Captain Clapham, Mr. Edmond, and the rest of our company, present their hearty respects to you for the *goodies*. Billy presents his duty to you and his grandmother, and love to his sister. Distribute my compliments among our acquaintance, and hearty love to all friends. The bearer waits, so that I cannot write to my dear Sally. I am, dear girl, your loving husband,

B. FRANKLIN.

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CXXXVI

TO MRS. JANE MECOM

PHILADELPHIA, 12 February, 1756.

DEAR SISTER:—I condole with you on the loss of our dear brother.[1] As our number grows less, let us love one another proportionably more.

I am just returned from my military expedition, and now my time is taken up in the Assembly. Providence seems to require various duties of me. I know not what will be next; but I find, the more I seek for leisure and retirement from business, the more I am engaged in it. Benny, I understand, inclines to leave Antigua. He may be in the right. I have no objection. My love to brother and to your children. I am, dearest sister, your affectionate brother,

B. FRANKLIN.

CXXXVII

TO MISS E. HUBBARD[2]

PHILADELPHIA, 23 February, 1756.

— I condole with you. We have lost a most dear and valuable relation. But it is the will of God and nature that these mortal bodies be laid aside when the soul is to enter into real life. This is rather an

[1] John Franklin, who died at Boston, in January, 1756, at the age of sixty-five.

[2] John Franklin married a second wife, by the name of Hubbard, a widow. Miss E. Hubbard, to whom this letter was addressed, was her daughter by a former marriage.

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embryo state, a preparation for living. A man is not completely born until he be dead. Why then should we grieve that a new child is born among the immortals, a new member added to their happy society?

We are spirits. That bodies should be lent us, while they can afford us pleasure, assist us in acquiring knowledge, or in doing good to our fellow creatures, is a kind and benevolent act of God. When they become unfit for these purposes, and afford us pain instead of pleasure, instead of an aid become an incumbrance, and answer none of the intentions for which they were given, it is equally kind and benevolent that a way is provided by which we may get rid of them. Death is that way. We ourselves, in some cases, prudently choose a partial death. A mangled painful limb which cannot be restored we willingly cut off. He who plucks out a tooth parts with it freely, since the pain goes with it; and he who quits the whole body, parts at once with all pains and possibilities of pains and diseases which it was liable to or capable of making him suffer.

Our friend and we were invited abroad on a party of pleasure, which is to last for ever. His chair was ready first, and he is gone before us. We could not all conveniently start together; and why should you and I be grieved at this, since we are soon to follow, and know where to find him? Adieu.

B. FRANKLIN.[1]

[1] On a similar occasion he wrote to his sister, a few days afterwards, as follows: "It is remarkable that so many breaches by death should be made in our family in so short a space. Out of seventeen children

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CXXXVIII

TO MRS. DEBORAH FRANKLIN

FREDERICKTOWN, VIRGINIA, 21 March, 1756.

MY DEAR CHILD:—We got here yesterday afternoon, and purpose sailing to-day if the wind be fair. Peter was taken ill with a fever and pain in his side before I got to Newcastle. I had him bled there, and put him into the chair wrapped up warm, as he could not bear the motion of the horse, and got him here pretty comfortably. He went immediately to bed, and took some camomile tea, and this morning is about again and almost well. I leave my horses at Mr. Milliken's, a gentleman that lives on Bohemia River.

Among the government orders I left with you, are two written ones drawn on Mr. Charles Norris for considerable sums. You did not tell me, when I asked you, what money you had in hand. If you want before my return, present one of those orders

that our father had, thirteen lived to grow up and settle in the world. I remember these thirteen (some of us then very young) all at one table, when an entertainment was made at our house, on occasion of the return of our brother Josiah, who had been absent in the East Indies, and unheard of for nine years. Of these thirteen, there now remain but three. As our number diminishes, let our affection to each other rather increase; for, besides its being our duty, it is our interest, since the more affectionate relations are to each other, the more they are respected by the rest of the world."

Again, speaking of the death of an acquaintance, he wrote: "Your neighbour must have been pretty well advanced in years when he died. I remember him a young man when I was a very young boy. In looking back, how short the time seems! I suppose that all the passages of our lives that we have forgotten, being so many links taken out of the chain, give the more distant parts leave, as it were, to come apparently nearer together."

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to Mr. Norris, and he will pay the whole or a part, as you have occasion. Billy will also pay you some money, which I did not care to take with me from Newcastle. Be careful of your accounts, particularly about the lottery affairs. My duty to mother, and love to Sally, Debby, Gracy, &c., not forgetting the Goody. Desire Dr. Bond to send me some of those pills by post. I forgot to take any with me. Let Mr. Parker know I received the money he sent me on the post-office and money-paper accounts. I forgot to write it to him, though I fully intended it. If there is peace I shall probably not come home so soon as I purposed to do in case the ships from England bring a declaration of war, or in case the uncertainty continues. I am, my dear child, your loving husband,

B. FRANKLIN.

CXXXIX

TO MRS. DEBORAH FRANKLIN

WILLIAMSBURG, 30 March, 1756.

MY DEAR CHILD:—I wrote to you *viâ* New York the day after my arrival, acquainting you that I had a fine journey and passage down the Bay, being but four days from Philadelphia to Colonel Hunter's, though stopped near a day on the road.[1] I have been well ever since, quite clear of the dizziness I complained of, and as gay as a bird, not beginning yet to long for home, the worry of perpetual business

[1] Franklin and Colonel Hunter were at this time jointly postmasters-general of the colonies, and the business of the post-office seems to have been the object of this journey to Virginia.

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being yet fresh in my memory. Mr. Hunter is much better than I expected to find him, and we are daily employed in settling our affairs. About the end of the week we are to take a tour into the country. Virginia is a pleasant country, now in full spring; the people obliging and polite. I shall return in the man-of-war to New York with Colonel Hunter and his lady; at least, this is proposed; but, if a more convenient opportunity offers, perhaps I may not stay so long as the end of the next month, when that ship is to sail. I am, my dear Debby, your loving husband,

B. FRANKLIN.[1]

CXL

TO JOSEPH HUEY

PHILADELPHIA, 6 June, 1756.[2]

SIR:—I received your kind letter of the 2d inst., and am glad to hear that you increase in strength.

[1] On the 10th of June he wrote from Philadelphia to William Parsons: "It is now a long time since I had the pleasure of a line from you. I am now returned from Virginia, where I was near two months. I should be glad to learn from you the present state of the forces in your county, and of the people. If in any thing I can serve you, command freely your old friend."

[2] Mr. Sparks publishes this letter as addressed to George Whitefield under date of June 6, 1753. In a note he says: "The above letter has often been printed, and always, I believe, as having been written to Whitefield, but among the author's MSS. I find the first draft, with the following indorsement in Franklin's handwriting: '*Letter to Joseph Huey.*'" Aside from the intrinsic improbability of Franklin's preaching such a sermon as this to Whitefield, there is no good reason to doubt that it was written to the man to whom it was addressed. The first draft, from which we print, is in the American Philosophical Society in Philadelphia.—EDITOR.

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I hope you will continue mending till you recover your former health and firmness. Let me know if you still use the cold bath, and what effect it has.

As to the kindness you mention, I wish it could have been of more service to you. But if it had, the only thanks I should desire is, that you would always be equally ready to serve any other person that may need your assistance, and so let good offices go round, for mankind are all of a family.

For my own part, when I am employed in serving others, I do not look upon myself as conferring favours, but as paying debts. In my travels and since my settlement I have received much kindness from men, to whom I shall never have any opportunity of making the least direct return, and numberless mercies from God, who is infinitely above being benefited by our services. These kindnesses from men I can therefore only return on their fellowmen; and I can only show my gratitude for those mercies from God, by a readiness to help his other children and my brethren. For I do not think that thanks and compliments tho' repeated weekly, can discharge our real obligations to each other, and much less those to our Creator.

You will see in this my notion of good works, that I am far from expecting (as you suppose) that I shall ever merit heaven by them. By heaven we understand a state of happiness, infinite in degree and eternal in duration. I can do nothing to deserve such reward. He that for giving a draught of water to a thirsty person should expect to be paid with a good plantation, would be modest in his de-

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mands, compared with those who think they deserve heaven for the little good they do on earth. Even the mixed, imperfect pleasures we enjoy in this world are rather from God's goodness than our merit; how much more such happiness of heaven. For my own part, I have not the vanity to think I deserve it, the folly to expect it, nor the ambition to desire it; but content myself in submitting to the will and disposal of that God who made me, who hitherto preserv'd and bless'd me, and in whose fatherly goodness I may well confide, that he will never make me miserable, and that even the afflictions I may at any time suffer shall tend to my benefit.

The faith you mention has doubtless its use in the world; I do not desire it to be diminished, nor would I endeavour to lessen it in any man. But I wish it were more productive of good works than I have generally seen it. I mean real good works, works of kindness, charity, mercy, and publick spirit; not holiday-keeping, sermon reading or hearing, performing church ceremonies, or making long prayers, filled with flatteries and compliments,—despis'd even by wise men, and much less capable of pleasing the Deity. The worship of God is a duty, the hearing and reading of sermons may be useful; but if men rest in hearing and praying, as too many do, it is as if a tree should value itself in being water'd and putting forth leaves, tho' it never produc'd any fruit.

Your great Master tho't much less of these outward appearances and professions than many of the modern disciples. He preferr'd the doers of the

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word to the mere hearers; the Son that seemingly refus'd to obey his father and yet perform'd his command, to him that profess'd his readiness but neglected the work; the heretical but charitable Samaritan, to the uncharitable tho' orthodox priest and sanctified Levite; and those who gave food to the hungry, drink to the thirsty, raiment to the naked, entertainment to the stranger, and relief to the sick, &c., tho' they never heard of his name, he declares shall in the last day be accepted, when those who cry Lord, Lord, who value themselves on their faith, tho' great enough to perform miracles, but have neglected good works, shall be rejected. he professed that he came not to call the righetous but sinners to repentance; which imply'd his modest opinion that there were some in His time so good that they need not hear even him for improvement; but nowadays we have scarce a little parson, that does not think it the duty of every man within his reach to sit under his petty ministrations, and that whoever omits them [1] [all the rest of this letter is torn out.]

[On the back of this letter is the following endorsement.]

In writing to his brother, August 6, 1747, Franklin says: "I am glad to hear that Mr. Whitefield is safe arrived, and recovered his health. He is a good man, and I love him."

[1] Mr. Sparks concludes his letter with the words "offends God." That is a very satisfactory conclusion, but we have no evidence that it was Franklin's.

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CXLI

TO MRS. JANE MECOM

NEW YORK, 28 June, 1756.

DEAR SISTER:—I received here your letter of extravagant thanks, which puts me in mind of the story of the member of Parliament, who began one of his speeches with saying he thanked God that he was born and bred a Presbyterian; on which another took leave to observe, that the gentleman must needs be of a most grateful disposition, since he was thankful for such very small matters.

You desire me to tell you what I know about Benny's removal, and the reasons of it. Some time last year, when I returned from a long journey, I found a letter from him, which had been some time unanswered, and it was some considerable time afterwards before I knew of an opportunity to send an answer. I should first have told you, that when I set him up at Antigua, he was to have the use of the printing-house on the same terms with his predecessor, Mr. Smith; that is, allowing me one third part of the profits. After this, finding him diligent and careful, for his encouragement, I relinquished that agreement, and let him know, that as you were removed into a dearer house, if he paid you yearly a certain sum, I forget what it was, towards discharging your rent, and another small sum to me, in sugar and rum for my family use, he need keep no farther accounts of the profits, but should enjoy all the rest himself. I cannot remember what the whole of both

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payments amounted to, but I think they did not exceed twenty pounds a year.

The truth is, I intended, from the first, to give him that printing-house; but as he was young and inexperienced in the world, I thought it best not to do it immediately, but to keep him a little dependent for a time, to check the flighty unsteadiness of temper, which, on several occasions, he had discovered; and what I received from him, I concluded to lay out in new letters (or types), that, when I should give it to him entirely, it might be worth his acceptance; and if I should die first, I put it in my will, that the letters should be all new cast for him.

This proposal of paying you and me a certain annual sum did not please him; and he wrote to desire I would explicitly tell him how long that annual payment was to continue; whether, on payment of that, all prior demands I had against him, for the arrears of our first agreement, were likewise cancelled; and finally insisted, that I would name a certain sum that I would take for the printing-house, and allow him to pay it off in parts as he could, and then the yearly payments to cease; for, though he had a high esteem for me, yet he loved freedom, and his spirit could not bear dependence on any man, though he were the best man living.

This was the letter, which casually remained, as I said, so long unanswered; at which he took farther offence; and before I could answer it, I received another from him, acquainting me that he had come to a resolution to remove from the Island; that his resolution was fixed, and nothing that could be said

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to him should move or shake it; and he proposed another person to me, to carry on the business in his room. This was immediately followed by another and a third letter, to the same purpose, all declaring the inflexibility of his determination to leave the Island, but without saying where he proposed to go, or what were his motives. So I wrote him, that I would not attempt to change his resolutions; that I made no objections to his quitting, but wished he had let me know where he was going; that, as to the person he recommended to succeed him, I had kept the office there after Mr. Smith's decease, in hopes it might be of use to him (Benny). I did not incline to be concerned with any other there. However, if the person would buy it, I named the price; if not, I directed it to be packed up and sent home. All I desired of him was to discharge what he owed to Mr. Strahan, bookseller in London, one of my friends, who had credited him on my recommendation.

By this post I received the enclosed letter, and understand the things are all arrived. I shall be very glad to hear he does better in another place, but I fear he will not for some years be cured of his fickleness, and get fixed to any purpose; however, we must hope for the best, as with this fault he has many good qualities and virtues.

My love to brother and children, and to all that love you. I am, dear sister, your affectionate brother,

B. Franklin.

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CXLII

TO WILLIAM PARSONS

New York, June 28, 1756.

Dear Friend:—I have received here your favor of the 19th instant, with a copy of your remarks on reviewing the forts, for which I am much obliged to you; and I hope the governor and commissioners will immediately take the necessary measures to remedy every thing that you find amiss. I think you hazarded yourself with too small escorts, and am glad you got safe through. It appears plainly that it will be of great use to review the forts frequently. The expense must be inconsiderable compared to the advantages and security that may be derived from it.

Great part of the British regiments are arrived here. The men are all in health, and look exceedingly well. What will be undertaken this summer is, I believe, unknown, or uncertain till the general's arrival. Some of the officers think this year will be chiefly spent in preparation for the next. Others imagine there will be an accommodation. For my part, I can make no judgment. This only I can plainly see, that New York is growing immensely rich by money brought into it from all quarters for the pay and subsistence of the troops. General Shirley, it is said, is to go home in the same ship that brings Lord Loudoun, and to be made one of the Lords of Trade. The Indians continue to scalp now and then a man too close to Albany, Oswego, and the camps. The New England forces are not

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yet complete. Those colonies have overdone themselves, and undertaken too much; more than they are able to bear or perform.

With great esteem, I am, dear friend, affectionately yours,

B. FRANKLIN.

CXLIII

TO GEO. WHITEFIELD

NEW YORK, July 2, 1756.

DEAR SIR:—I received your favour of the 24th of February with great pleasure, as it informed me of your welfare, and expressed your continued regard for me. I thank you for the pamphlet you enclosed to me.[1] As we have just observed a provincial fast on the same occasion, I thought it very seasonable to be published in Pennsylvania; and accordingly reprinted it immediately.

You mention your frequent wish that you were a chaplain to the American army. I sometimes wish that you and I were jointly employed by the crown to settle a colony on the Ohio. I imagine that we could do it effectually, and without putting the nation to much expense; but I fear we shall never be called upon for such a service. What a glorious thing it would be to settle in that fine country a large, strong body of religious and industrious people!

[1] Doubtless, Whitefield's *Short Address to Persons of all Denominations.*

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What a security to the other colonies and advantage to Britain, by increasing her people, territory, strength, and commerce! Might it not greatly facilitate the introduction of pure religion among the heathen, if we could, by such a colony, show them a better sample of Christians than they commonly see in our Indian traders?—the most vicious and abandoned wretches of our nation! Life, like a dramatic piece, should not only be conducted with regularity, but, methinks, it should finish handsomely. Being now in the last act, I begin to cast about for something fit to end with. Or, if mine be more properly compared to an epigram, as some of its lines are but barely tolerable, I am very desirous of concluding with a bright point. In such an enterprise, I could spend the remainder of life with pleasure; and I firmly believe God would bless us with success, if we undertook it with a sincere regard to His honour, the service of our gracious king, and (which is the same thing) the public good.

I thank you cordially for your generous benefactions to the German schools. They go on pretty well; and will do better, when Mr. Smith, who has at present the principal charge of them, shall learn to mind party-writing and party politics less, and his proper business more; which, I hope, time will bring about.

I thank you for your good wishes and prayers; and am, with greatest esteem and affection, dear Sir, your most obedient humble servant,

BENJAMIN FRANKLIN.

My best respects to Mrs. Whitefield.

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CXLIV

TO THOMAS POWNALL [1]

PHILADELPHIA, 19 August, 1756.

SIR:—I have done myself the honor to write you twice since my return, relating to the proposed road; but have as yet had no line from you.

Enclosed I send you a copy of the late treaty, or conference, at Easton, with a letter from Bishop Spangenberg to Mr. Norris, by which you will see nothing is likely to come of the treaty. The Indians are preparing to continue the war, and we see of how little consequence Sir William Johnson's treaty has been in our behalf. For my own part, I make no doubt but the Six Nations have privily encouraged these Indians to fall upon us. They have taken no step to defend us, as their allies, nor to prevent the mischief done us. I look upon the application made through Sir William Johnson to these nations to

[1] Thomas Pownall, commonly called Governor Pownall, came first to America with Sir Danvers Osborn, Governor of New York, in 1753. His brother, John Pownall, was one of the secretaries to the Board of Trade; and Thomas Pownall had made himself well acquainted with American affairs. He returned to England in February, 1756, but came back to America again with the Earl of Loudoun, who landed at New York on the 23d of July following. In the next year, 1757, he succeeded General Shirley as governor of Massachusetts. At later periods he was lieutenant-governor of New Jersey, and governor of South Carolina, though it would seem that he remained but a short time in either of these two last stations. He was a member of Parliament from 1768 to 1780, and opposed with much boldness and ability the ministerial measures against the colonies. He wrote and published various tracts relating to America, the most valuable of which is his treatise entitled, *Administration of the Colonies*, which passed through several editions. He died in 1805, at the advanced age of eighty-three years.—SPARKS.

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procure us peace, as the most unfortunate step we ever took; for we tied up the hands of our people, till we heard the result of that application. The affair was drawn out to great length of time, and in the mean while our frontier people were continually butchered, and at last either dispersed or dispirited. In short, I do not believe we shall ever have a firm peace with the Indians till we have well drubbed them.

Our frontiers are greatly distressed, as you will see by the enclosed letters. The people are also distressed by the enlisting of their servants; but, if Lord Loudoun would order the recruits, now near five hundred, to march up and take post on the frontiers, in the forts there, where they would find good barracks, and would be of great use to the inhabitants, it would be a most acceptable thing to the whole province. In this Mr. Norris joins with me, as well as in compliments to his Lordship and yourself.

The Assembly are met, and in a very good disposition toward the service; but, the new governor being hourly expected, nothing can be done till his arrival. He is, we hear, on the road from York. I am, Sir, &c.,

B. FRANKLIN.

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CXLV

TO GEORGE WASHINGTON [1]

PHILADELPHIA, 19 August, 1756.

SIR:—I have your favors of July 23d and August 3d, but that you mention to have wrote by Mr. Balfour is not come to hand. I forwarded the packet enclosed in that of July 23d, as directed, and shall readily take care of any other letters from you, that pass through my hands. The post, between this place and Winchester, was established for the accommodation of the army chiefly, by a vote of our Assembly. They are not willing to continue the charge, and it must, I believe, be dropped, unless your Assembly and that of Maryland will contribute to support it, which, perhaps, is scarce to be expected.

I am sorry it should be laid down, as I shall myself be a loser in the affair of newspapers.[2] But the letters per post by no means defray the expense. If you can prevail with your Assembly to pay the rider from Winchester to Carlisle, I will endeavour to persuade ours to continue paying the rider from Carlisle hither. My agreement with the house was, to carry all public despatches gratis, to keep account of postage received for private letters, and charge

[1] At this time commander-in-chief of the Virginia forces raised to protect the frontiers from the Indians and French. His head-quarters were at Winchester. Franklin, in his capacity of postmaster-general for the colonies, had, the year previous, during Braddock's march, arranged a post between Philadelphia and Winchester, in consequence of a vote of the Pennsylvania Assembly.

[2] At this time Franklin printed and published a newspaper in Philadelphia.

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the expense of riders and offices; and they were to pay the balance. I am, Sir, with great esteem and respect, &c.,

B. FRANKLIN.

P. S.—We have just received news that the Delaware Indians, with whom we treated lately at Easton, have burnt the goods they received as presents, and resolved to continue the war.[1]

CXLVI

TO MRS. DEBORAH FRANKLIN

EASTON, 13 November, 1756.

MY DEAR CHILD:—I wrote to you a few days since by a special messenger, and enclosed letters for all our wives and sweethearts; expecting to hear from

[1] Though Franklin was actively engaged in these important affairs, which had an immediate claim upon his exertions, he took a not less zealous or liberal part in promoting objects of general utility; as is manifest by the following extract from a letter written to him by Mr. William Shipley, dated London, September 1, 1756. Mr. Shipley was secretary to the society, in whose behalf he wrote.

"Sir, I am ordered to acquaint you that the Society for the Encouragement of Arts, Manufactures, and Commerce have unanimously elected you a corresponding member; and it gives the Society a singular pleasure to place upon their list a gentleman whose public spirit and uncommon abilities are so universally known and so deservedly esteemed. They are glad to find their plan approved by you, and will always give great attention to what you shall judge most proper for their encouragement in America, which they hope from time to time you will please to let them know. They return you thanks for your generous present of twenty guineas, which their treasurer has received by the hands of Mr. Collinson. They earnestly desire your correspondence, information, and advice."

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you by his return, and to have the northern newspapers and English letters per the packet; but he is just now returned without a scrap for poor us. So I had a good mind not to write to you by this opportunity; but I never can be ill natured enough even when there is the most occasion. The messenger says he left the letters at your house, and saw you afterwards at Mr. Duché's, and told you when he would go, and that he lodged at Honey's, next door to you, and yet you did not write; so let Goody Smith give one more just judgment, and say what should be done to you. I think I won't tell you that we are well, nor that we expect to return about the middle of the week, nor will I send you a word of news; that 's poz.

My duty to mother, love to the children, and to Miss Betsey and Gracy, &c., &c. I am your *loving* husband,

B. FRANKLIN.

P. S.—I have *scratched out the loving words*, being writ in haste by mistake, when I *forgot I was angry.*[1]

CXLVII

TO EDWARD AND JANE MECOM

PHILADELPHIA, 30 December, 1756.

DEAR BROTHER AND SISTER:—You will receive this by the hand of your son Benjamin, on whose safe

[1] When the above letter was written, the author was at Easton, in Pennsylvania, attending a conference with the Indians. The successes of the French on the frontiers, and the disasters which followed

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return from the West Indies I sincerely congratulate you.

He has settled accounts with me, and paid the balance honorably. He has also cleared the old printing-house to himself, and sent it to Boston, where he purposes to set up his business, together with bookselling, which, considering his industry and frugality, I make no doubt will answer. He has good credit and some money in England, and I have helped him by lending him a little more; so that he

Braddock's defeat, had excited the Indians to hostilities; and murders and other outrages had been committed by them even in the heart of the province. To counteract the influence of the French and bring the Indians to a better temper, it was deemed expedient to hold an amicable conference with some of their chiefs. Governor Denny was present in person, and also William Logan and Richard Peters, on the part of the Council; and Benjamin Franklin, Joseph Fox, William Masters, and John Hughes, as delegates from the Assembly. The conference was opened at Easton on the 8th of November. Teedyuscung, a king of the Delawares, residing at Wyoming, was the principal speaker for the Indians. He explained the reasons of the recent hostilities, but said he was now at peace, and wished to remain so. He promised to return all the prisoners, and demanded that the Indians who had been taken should likewise be sent back to him. He also complained of wrongs which he had suffered.

"I do not want," said he, "to compel any of the Indians to return or to stay against their will. If they are inclined to stay and live among the English, I am quite willing they should go back again; but I want that they should come and see me, that thereby I may convince their relations and the other nations afar off, that they are not servants, but free people.

"The kings of England and France," he added, "have settled or wrought this land so as to coop us up, as if in a pen. This very ground that is under me" (striking it with his foot) "was my land and inheritance, and was taken from me by fraud; when I say this ground, I mean all the land lying between Tohiccon Creek and Wyoming on the River Susquehanna. The Proprietaries, who have purchased their lands from us cheap, have sold them too dear to poor people, and the Indians have suffered for it. It would have been more prudent for the Proprietaries to sell the lands cheaper, and to have given it in

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may expect a cargo of books, and a quantity of new letter, in the spring; and I shall from time to time furnish him with paper. We all join in love to you and yours. I am your loving brother,

B. FRANKLIN.

charge to the people, who bought from them, to use the Indians with kindness on that account."

The governor asked him what he meant by fraud.

Teedyuscung replied: "When one man had formerly liberty to purchase lands, and he took the deeds from the Indians for it, and then died; after his death, the children forge the deed for the true one, with the same Indian names to it, and thereby take lands from the Indians which they never sold: this is fraud. Also, when one king has land beyond the river, and another king has land on this side, both bounded by rivers, mountains, and springs, which cannot be moved, and the Proprietaries, greedy to purchase lands, buy of one king what belongs to another; this is likewise fraud.

"All the land extending from Tohiccon Creek, over the great mountain to Wyoming, has been taken from me by fraud; for, when I had agreed to sell the land to the old Proprietary by the course of the river, the young Proprietaries came, and got it run by a straight course by the compass, and by that means took in double the quantity intended to be sold."

Though these charges were not allowed to be correct, yet the commissioners thought it advisable to put an end to the complaints of the Indians by satisfying their claims, and they offered to Teedyuscung a suitable compensation. He declined accepting it on the ground that other tribes besides his own were concerned and must be consulted, and concluded by saying that in the spring he would bring them together for another treaty.

The manuscript minutes of this singular conference have been preserved in the archives of the American Philosophical Society. The commissioners, who attended the conference on the part of the Assembly, were not satisfied with the manner in which the minutes were reported to that body by the governor, and they signed jointly an explanatory paper, which was probably drawn up by Franklin, and which is printed in the *Votes and Proceedings of the Assembly*, under the date of January 29, 1757.—SPARKS.

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CXLVIII

PLAN

FOR SETTLING TWO WESTERN COLONIES IN NORTH AMERICA, WITH REASONS FOR THE PLAN [1]

The great country back of the Appalachian Mountains, on both sides of the Ohio, and between that river and the Lakes, is now well known, both to the English and French, to be one of the finest in North America, for the extreme richness and fertility of the land, the healthy temperature of the air, and mildness of the climate; the plenty of hunting, fishing, and fowling; the facility of trade with the Indians, and the vast convenience of inland navigation or water-carriage by the Lakes and great rivers, many hundreds of leagues around.

From these natural advantages it must undoubt-

[1] Dr. Franklin was early possessed of the belief, that great advantage would redound to the English colonies on the sea-board by settlements beyond the Alleghanies under governments distinctly organized. Such settlements would not only rapidly increase in population, thereby strengthening the power of the whole, but would serve as a barrier to the other colonies against the Indians and French, who, in time of war, made descents upon the frontiers, kept the people in alarm, and caused great expense in raising troops and supporting an army to repel their invasions. He pursued this favorite object for many years; and after he went to England a company was formed, under his auspices, who petitioned for a grant to settle a colony west of the Allegany Mountains. Many obstacles were encountered, but the application was at last successful. The scheme was prevented from being carried into effect by the troubles immediately preceding the revolution.

The following paper was probably written shortly after the Albany Convention, in 1754, at the request of Governor Pownall, who had a project for settling what he called "barrier colonies." He presented

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edly (perhaps in less than another century) become a populous and powerful dominion [1]; and a great accession of power either to England or France.

The French are now making open encroachments on those territories, in defiance of our known rights; and, if we longer delay to settle that country, and suffer them to possess it, these *inconveniences and mischiefs* will probably follow:

1. Our people, being confined to the country between the sea and the mountains, cannot much more increase in number, people increasing in proportion to their room and means of subsistence.

2. The French will increase much more, by that

a memorial to the Duke of Cumberland on this subject in the year 1756, in which he says:

"If the English would advance one step further, or cover themselves where they are, it must be at once, by one large step over the mountains, with a numerous and military colony. Where such should be settled, I do not take upon me to say; at present I shall only point out the measure and the nature of it, by inserting two schemes, one of Dr. Franklin's, the other of your memorialist; and if I might indulge myself with scheming, I should imagine that two such were sufficient, and only requisite and proper; one at the back of Virginia, filling up the vacant space between the Five Nations and southern confederacy, and connecting into one system our barrier; the other somewhere in the Cohass on Connecticut River, or wherever best adapted to cover the New England colonies. These, with the little settlements mentioned above in the Indian countries, complete my idea of this branch."—*Administration of the Colonies*, 4th ed., Append., p. 48.

When this memorial, with Franklin's plan, was presented, the whole country was too much involved in the war with the French and Indians, to allow any scheme of this sort to be matured; the peace followed, when the occasion for them was less pressing; and the revolution opened the way to other methods of attaining the same object. —SPARKS.

[1] This prediction has been verified in a much less time than even the author anticipated.—EDITOR.

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acquired room and plenty of subsistence, and become a great people behind us.

3. Many of our debtors and loose English people, our German servants, and slaves, will probably desert to them, and increase their numbers and strength, to the lessening and weakening of ours.

4. They will cut us off from all commerce and alliance with the western Indians, to the great prejudice of Britain, by preventing the sale and consumption of its manufactures.

5. They will both in time of peace and war (as they have always done against New England) set the Indians on to harass our frontiers, kill and scalp our people, and drive in the advanced settlers; and so, in preventing our obtaining more subsistence by cultivating of new lands, they discourage our marriages, and keep our people from increasing; thus (if the expression may be allowed) killing thousands of our children before they are born.

If two strong colonies of English were settled between the Ohio and Lake Erie, in the places hereafter to be mentioned, these advantages might be expected:

1. They would be a great security to the frontiers of our other colonies, by preventing the incursions of the French and French Indians of Canada, on the back parts of Pennsylvania, Maryland, Virginia, and the Carolinas; and the frontiers of such new colonies would be much more easily defended, than those of the colonies last mentioned now can be, as will appear hereafter.

2. The dreaded junction of the French settle-

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ments in Canada with those of Louisiana would be prevented.

3. In case of a war, it would be easy, from those new colonies, to annoy Louisiana, by going down the Ohio and Mississippi; and the southern part of Canada, by sailing over the Lakes, and thereby confine the French within narrow limits.

4. We could secure the friendship and trade of the Miamis or Twigtwees (a numerous people consisting of many tribes, inhabiting the country between the west end of Lake Erie, and the south end of Lake Huron, and the Ohio), who are at present dissatisfied with the French and fond of the English, and would gladly encourage and protect an infant English settlement in or near their country, as some of their chiefs have declared to the writer of this memoir. Further, by means of the Lakes, the Ohio, and the Mississippi, our trade might be extended through a vast country, among many numerous and distant nations, greatly to the benefit of Britain.

5. The settlement of all the intermediate lands, between the present frontiers of our colonies on one side, and the Lakes and Mississippi on the other, would be facilitated and speedily executed, to the great increase of Englishmen, English trade, and English power.

The grants to most of the colonies are of long, narrow slips of land, extending west from the Atlantic to the South Sea. They are much too long for their breadth; the extremes at too great a distance; and therefore unfit to be continued under their present dimensions.

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Several of the old colonies may conveniently be limited westward by the Allegany or Appalachian mountains, and new colonies formed west of those mountains.

A single old colony does not seem strong enough to extend itself otherwise than inch by inch. It cannot venture a settlement far distant from the main body, being unable to support it; but if the colonies were united under one governor-general and grand council, agreeably to the Albany plan, they might easily, by their joint force, establish one or more new colonies, whenever they should judge it necessary or advantageous to the interest of the whole.

But if such union should not take place, it is proposed that two charters be granted, *each* for some considerable part of the lands west of Pennsylvania and the Virginia mountains, to a number of the nobility and gentry of Britain; with such Americans as shall join them in contributing to the settlement of those lands, either by paying a proportion of the expense of making such settlements, or by actually going thither in person, and settling themselves and families.

That by such charters it be granted that every actual settler be entitled to a tract of —— acres for himself, and —— acres for every poll in the family he carries with him; and that every contributor of —— guineas be entitled to a quantity of acres, equal to the share of a single settler, for every such sum of guineas contributed and paid to the colony treasurer; a contributor for —— shares to have an additional

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share *gratis;* that settlers may likewise be contributors, and have right of land in both capacities.

That as many and as great privileges and powers of government be granted to the contributors and settlers, as his Majesty in his wisdom shall think most fit for their benefit and encouragement, consistent with the general good of the British empire; for extraordinary privileges and liberties, with lands on easy terms, are strong inducements to people to hazard their persons and fortunes in settling new countries. And such powers of government as (though suitable to their circumstances, and fit to be trusted with an infant colony) might be judged unfit when it becomes populous and powerful, these might be granted for a term only; as the choice of their own governor for ninety-nine years; the support of government in the colonies of Connecticut and Rhode Island (which *now* enjoy that and other like privileges) being much less expensive than in the colonies under the immediate government of the crown, and the constitution more inviting.

That the first contributors to the amount of —— guineas be empowered to choose a treasurer to receive the contribution.

That no contributions be paid till the sum of —— thousand guineas be subscribed.

That the money thus raised be applied to the purchase of the lands from the Six Nations and other Indians, and of provisions, stores, arms, ammunition, carriages, &c., for the settlers, who, after having entered their names with the treasurer, or person by him appointed to receive and enter them, are, upon

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public notice given for that purpose, to rendezvous at a place to be appointed, and march in a body to the place destined for their settlement, under the charge of the government to be established over them. Such rendezvous and march, however, not to be directed till the number of names of settlers entered, capable of bearing arms, amount at least to —— thousand.

It is apprehended that a great sum of money might be raised in America on such a scheme as this; for there are many who would be glad of any opportunity, by advancing a small sum at present, to secure land for their children, which might in a few years become very valuable; and a great number, it is thought, of actual settlers might likewise be engaged (some from each of our present colonies), sufficient to carry it into full execution by their strength and numbers; provided only, that the crown would be at the expense of removing the little forts the French have erected in their encroachments on his Majesty's territories, and supporting a strong one near the Falls of Niagara, with a few small armed vessels, or half-galleys to cruise on the Lakes.

For the security of this colony in its infancy, a small fort might be erected and for some time maintained at Buffalo Creek on the Ohio, above the settlement; and another at the mouth of the Tioga, on the south side of Lake Erie, where a port should be formed and a town erected for the trade of the Lakes. The colonists for this *settlement* might march by land through Pennsylvania.

The river Scioto, which runs into the Ohio about

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two hundred miles below Logstown, is supposed the fittest seat for the *other colony;* there being for forty miles on each side of it, and quite up to its heads, a body of all rich land; the finest spot of its bigness in all North America, and has the particular advantage of sea-coal in plenty (even above ground in two places) for fuel, when the woods shall be destroyed. This colony would have the trade of the Miamis or Twigtwees; and should, at first, have a small fort near Hochockin, at the head of the river, and another near the mouth of Wabash. Sandusky, a French fort near the Lake Erie, should also be taken; and all the little French forts south and west of the Lakes, quite to the Mississippi, be removed, or taken and garrisoned by the English. The colonists for this settlement might assemble near the heads of the rivers in Virginia, and march over land to the navigable branches of the Kenhawa, where they might embark with all their baggage and provisions, and fall into the Ohio, not far above the mouth of the Scioto. Or they might rendezvous at Will's Creek, and go down the Monongahela to the Ohio.

The fort and armed vessels at the strait of Niagara would be a vast security to the frontiers of these new colonies against any attempts of the French from Canada. The fort at the mouth of the Wabash would guard that river, the Ohio, and the Cutava River, in case of any attempt from the French of the Mississippi. Every fort should have a small settlement round it, as the fort would protect the settlers, and the settlers defend the fort and supply it with provisions.

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The difficulty of settling the first English colonies in America, at so great a distance from England, must have been vastly greater than the settling these proposed new colonies; for it would be the interest and advantage of all the present colonies to support these new ones; as they would cover their frontiers, and prevent the growth of the French power behind or near their present settlements; and the new country is nearly at equal distance from all the old colonies, and could easily be assisted from all of them.

And as there are already in all the old colonies many thousands of families that are ready to swarm, wanting more land, the richness and natural advantage of the Ohio country would draw most of them thither, were there but a tolerable prospect of a safe settlement. So that the new colonies would soon be full of people; and, from the advantage of their situation, become much more terrible to the French settlements than those are now to us. The gaining of the back Indian trade from the French, by the navigation of the Lakes, &c., would of itself greatly weaken our enemies, it being now their principal support. It seems highly probable, that in time they must be subjected to the British crown, or driven out of the country.

Such settlements may better be made now, than fifty years hence; because it is easier to settle ourselves, and thereby prevent the French settling there, as they seem now to intend, than to remove them when strongly settled.

If these settlements are postponed, then more forts and stronger, and more numerous and expensive gar-

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risons, must be established, to secure the country, prevent their settling, and secure our present frontiers; the charge of which may probably exceed the charge of the proposed settlements, and the advantage nothing near so great.

The fort at Oswego should likewise be strengthened, and some armed half-galleys, or other small vessels, kept there to cruise on Lake Ontario, as proposed by Mr. Pownall in his paper laid before the commissioners at the Albany treaty.

If a fort was also built at Tirondequat on Lake Ontario, and a settlement made there near the lake side, where the lands are said to be good, much better than at Oswego, the people of such settlements would help to defend both forts on any emergency.

CXLIX

TO ROBERT CHARLES.[1]

PHILADELPHIA, 1 February, 1757.

SIR:—By this ship you will receive a box containing sundry copies of our last years' *Votes*, to which are added, as you advised, the accounts of the expenditure of the fifty-five thousand pounds, and the subsequent thirty thousand. Also the papers relating to the employing of foreign officers. There is likewise in the box an authenticated copy of our late bill for granting one hundred thousand to the King's use, and of the vote appointing yourself and Mr.

[1] Many years agent in England for the Assembly of Pennsylvania.

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Partridge agents, under the great seal, with all the late messages. You will see in the *Votes* a copy of the Proprietary Instructions, in which a money bill is made for us by the Proprietary, sitting in his closet at one thousand leagues' distance.

The governor laid before us an estimate of the necessary expense for defraying the province one year, amounting to one hundred and five thousand pounds. We knew our inability to bear the raising of so great a sum in so short a time. We deducted the least necessary articles, and reduced it to one hundred thousand pounds, which we granted, and sent up the bill. Not that we thought this province capable of paying such a tax yearly, or any thing near it, but believing it necessary to exert ourselves at this time in an extraordinary manner, to save the country from total ruin by the enemy. The governor to use his own polite word, REJECTS it. Your English kings, I think, are complaisant enough to say *they will advise upon it.* We have no remedy here, but must obey the instructions, by which we are so confined, as to the time of rating the property to be taxed, the valuation of that property, and the sum per pound to be taxed on the valuation, that it is demonstrably impossible by such a law to raise one quarter of the money absolutely necessary to defend us. Three fourths of the troops must be disbanded, and so the country be exposed to the mercy of our enemies, rather than the least tittle of a Proprietary instruction should be deviated from!

I forbear to enlarge, because the House have unanimously desired your friend Mr. Norris, and my-

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self, to go home immediately, to assist their agents in getting these matters settled. He has not yet determined; but if he goes, you will by him be fully informed of every thing, and my going will not, in my opinion, be necessary. If he declines it, I may possibly soon have the pleasure of seeing you. I am with great respect, Sir, &c., B. FRANKLIN.

CL

REPORT

OF THE COMMITTEE OF AGGRIEVANCES OF THE ASSEMBLY OF PENNSYLVANIA

DATED FEBRUARY 22D, 1757.[1]

In obedience to the order of the House, we have drawn up the heads of the most important aggrievances that occur to us, which the people of this province with great difficulty labor under; the many infractions of the constitution (in manifest violation of the royal grant, the proprietary charter, the laws of this province, and of the laws, usages, and customs

[1] The English colonial governments were of three sorts. First, *Provincial* governments; where the constitution originally depends on the King's commission and instructions, given to his governors; and the Assemblies, held under that authority, have their share in making local ordinances not repugnant to English law. Next, *Proprietary* governments; where a district of country is given by the crown to individuals, attended with certain legislative powers in the nature of a fief; with a provision for the sovereignty at home, and also for the fulfilment of the terms and end of the grant. Lastly, *Charter* governments, where the fundamentals of the government are previously prescribed and made known to the settlers, being in no degree left

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of our mother country), and other matters, which we apprehend call aloud for redress.

They are as follows:

First. By the royal charter (which has ever been, ought to be, and truly is, the principal and invariable fundamental of this constitution), King Charles the Second did give and grant unto William Penn, his heirs and assigns, the province of Pennsylvania; and also to him and his heirs, and his or their *deputies* or lieutenants, free, full, and absolute power for the good and happy government thereof, to make and enact any laws, "according to their best discretion, by and with the advice, assent, and approbation of the *freemen* of the said country, or of their delegates or deputies"; for the raising of money, or any other end appertaining to the public state, peace, or safety of the said country. By the words of this grant, it is evident that full powers are granted to the *deputies* and lieutenants of William Penn and his heirs, to concur with the people in framing laws for their protection and the safety of the province, according to their best

subject to a governor's commission or proprietor's will. (See *Blackstone*, Vol. I. Introd. § 4.) Good faith, however, to mankind, seemed to require that the constitutions, once begun under the provincial or proprietary governments, should remain unaltered (except for improvement) to the respective settlers; equally as in charter governments.

By the last paragraph of the following Report, it seems that the Assembly established in Pennsylvania intended to send commissioners to England to solicit redress of various grievances, particularly respecting their Proprietors' conduct; and that, the business being referred to a committee of the Assembly, the following Report was meant to convey the opinion of that committee concerning the instructions necessary to be given by the Assembly to the commissioners. —B. V.

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discretion; independent of any instructions or directions they should receive from their *principals*. And it is equally obvious to your committee, that the *people* of this province and their representatives were interested in this royal grant; and by virtue thereof have an original right of legislation inherent in them, which neither the proprietors nor any other person whatsoever can divest them of, restrain or abridge, without manifestly violating and destroying the letter, spirit, and design of this grant.

Nevertheless we unfortunately find, that the proprietaries of this province, regardless of this sacred fundamental of all our rights and liberties, have so abridged and restricted their late and present *governor's* discretion in matters of legislation, by their illegal, impracticable, and unconstitutional instructions and prohibitions, that no bill for granting aids and supplies to our most gracious Sovereign (be it ever so reasonable, expedient, and necessary for the defence of his Majesty's colony, and safety of his people), unless it be agreeable thereto, can meet with its approbation; by means whereof the many considerable sums of money, which have been offered for those purposes by the Assemblies of this province (ever anxious to maintain his honor and rights), have been rejected; to the great encouragement of his Majesty's enemies, and the imminent danger of the loss of this his colony.

Secondly. The representatives of the people in General Assembly met, by virtue of the said royal grant, and the charter and privileges granted by the said William Penn, and a law of this province, have right

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to, and ought to enjoy, all the powers and privileges of an Assembly, according to the rights of the freeborn subjects of England, and as is usual in any of the plantations of America. It is an indubitable and now an uncontested right of the Commons of England to *grant aids* and supplies to his Majesty in any manner they think most easy to themselves and the people; and they are the sole judges of the *measure, manner, and time* of granting and raising the same.

Nevertheless the proprietaries of this province, in contempt of the said royal grant, proprietary charter, and law of their colony; designing to subvert the fundamentals of this constitution, to deprive the Assembly and people of their grants and privileges, and to assume an arbitrary and tyrannical power over the liberties and properties of his Majesty's liege subjects; have so restrained their governors by the *despotic instructions* (which are not to be varied from, and are particularly directory in the framing and passing of money bills and supplies to his Majesty, as to the mode, measure, and time), that it is impossible for the Assembly, should they loose all sense of their most essential rights, and comply with those instructions, to grant sufficient aids for the defence of this his Majesty's province from the common enemy.

Thirdly. In pursuance of sundry acts of General Assembly, approved of by the crown, and a natural right inherent in every man antecedent to all laws, the Assemblies of this province have had the power of *disposing* of the *public* moneys, that have been raised for the encouragement of trade and support of government by the interest money arising by the

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loans of the bills of credit and the excise. No part of these moneys was ever paid by the *proprietaries*, or ever raised on their estates; and therefore they can have no pretence of right to a voice in the disposition of them. They have even been applied with prudent frugality to the honor and advantage of the public and the King's immediate service, to the general approbation of the people; the credit of the government has been preserved, and the debts of the public punctually discharged. In short, no inconveniences, but great and many advantages, have accrued from the Assembly's prudent care and management of these funds.

Yet the proprietaries resolved to deprive the Assemblies of the power and means of *supporting an agent* in England, and of prosecuting their complaints and remonstrating their aggrievances, when injured and oppressed, to his Majesty and his Parliament; and, to rob them of this natural right (which has been so often approved of by their gracious Sovereign), have, by their said instructions, prohibited their governor from giving his assent to any laws emitting or reëmitting any paper currency or bills of credit, or for raising money by excise or any other method; unless the governor or commander-in-chief for the time being, by clauses to be inserted therein, have *a negative in the disposition* of the moneys arising thereby; let the languishing circumstances of our trade be ever so great, and a further or greater medium be ever so necessary for its support.

Fourthly. By the laws and statues of England, the chief rents, honors, and castles of the *crown* are

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taxed, and *pay their proportion* to the supplies that are granted to the King for the defence of the realm and support of government. His Majesty, the nobility of the realm, and all the British subjects do now actually contribute their proportion towards the defence of America in general, and this province in particular; and it is in a more especial manner the duty of the *proprietaries* to pay their proportion of a tax for the immediate preservation of their own estates in this province. To exempt, therefore, any part of their estates from their reasonable part of this necessary burthen, is as unjust as it is illegal, and as new as it is arbitrary.

Yet the proprietaries, notwithstanding the general danger to which the nation and its colonies are exposed, and great distress of this province in particular, by their said instructions have prohibited their governors from passing laws for the raising supplies for its defence; *unless* all their located, unimproved, and unoccupied lands, quit-rents, fines, and purchase moneys on interest (the much greater part of their enormous estates in this colony) are expressly exempted from paying any part of the tax.

Fifthly. By virtue of the said royal charter, the proprietaries are invested with a power of doing all things, "which unto a complete establishment of justice, unto courts and tribunals, forms of judicature, and manner of proceedings, do belong." It was certainly the import and design of this grant, that the courts of judicature should be formed, and the *judges* and officers thereof hold their commissions, in a manner not repugnant, but agreeable, to the laws and

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customs of England; that thereby they might remain free from the influence of persons in power, the rights of the people might be preserved, and their properties effectually secured. That the grantee, William Penn (understanding the said grant in this light), did, by his original frame of government, covenant and grant with the people, that the judges and other officers should hold their commissions during their *good behaviour, and no longer.*

Notwithstanding which, the governors of this province have, for many years past, granted all the commissions to the judges of the King's Bench or supreme court of this province, and to the judges of the court of Common Pleas of the several counties, to be held during their *will and pleasure;* by means whereof the said judges being subject to the influence and direction of the proprietaries and their governors, their favorites and creatures, the laws may not be duly administered or executed, but often wrested from their true sense to serve particular purposes; the foundation of justice may be liable to be destroyed; and the lives, laws, liberties, privileges, and properties of the people thereby rendered precarious and altogether insecure; to the great disgrace of our laws, and the inconceivable injury of his Majesty's subjects.

Your committee further beg leave to add, that, besides these aggrievances, there are other hardships the people of this province have experienced, that call for redress. The *enlistment of servants without the least satisfaction* being made to the masters, has not only prevented the cultivation of our lands, and

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diminished the trade and commerce of the province, but is a burthen extremely unequal and oppressive to individuals. And should the practice continue, the consequence must prove very discouraging to the further settlement of this colony, and prejudicial to his Majesty's future service. Justice, therefore, demands that satisfaction should be made to the masters of such enlisted servants, and that the right of masters to their servants be confirmed and settled. But as those servants have been enlisted into his Majesty's service for the general defence of America, and not of this province only, but all the colonies, and the nation in general, have and will receive equal benefit from their service, this satisfaction should be made at the expense of the nation, and not of the province only.

That the people now labor under *a burthen of taxes* almost insupportable by so young a colony, for the defence of its long-extended frontier, of about two hundred miles from New Jersey to Maryland; without either of these colonies, or the three lower counties on Deleware, contributing their proportion thereto; though their frontiers are in a great measure covered and protected by our forts. And should the war continue, and with it this unequal burthen, many of his Majesty's subjects in this province will be reduced to want; and the province, if not lost to the enemy, involved in debt and sunk under its load.

That, notwithstanding this weight of taxes, the Assemblies of this province *have given to the general service* of the nation five thousand pounds to purchase provisions for the troops under General Braddock;

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£2,985. 0*s*. 11*d*. for clearing a road by his orders; £10,514. 10*s*. 1*d*. to General Shirley, for the purchasing provisions for the New England forces; and expended the sum of £2,385. 0*s*. 2½*d*. in supporting the inhabitants of Nova Scotia; which likewise we conceive ought to be a national expense.

And that his Majesty's subjects, the merchants and insurers in England, as well as the merchants here and elsewhere, did during the last and will during the present war greatly suffer in their property, trade, and commerce, by the *enemy's privateers* on this coast, and at our capes, unless some method be fallen on to prevent it.

Wherefore your committee are of opinion, that the commissioners, intended to be sent to England to solicit a memorial and redress of the many infractions and violations of the constitution, should also have it in charge, and be instructed, to represent to our most gracious Sovereign and his Parliaments the several unequal burthens and hardships before mentioned; and endeavour to procure satisfaction to the masters of such servants as have been enlisted, and the right of masters to their servants established and confirmed; and obtain a repayment of the said several sums of money, some assistance towards defending our extensive frontier, and a vessel of war to protect the trade and commerce of this province.

Submitted to the correction of the House.

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CLI

TO MRS. JANE MECOM

PHILADELPHIA, 21 February, 1757.

DEAR SISTER:—I am glad to hear your son has got well home. I like your conclusion not to take a house for him till summer, and if he stays till his new letters arrive, perhaps it would not be amiss; for a good deal depends on the first impression a man makes. As he will keep a bookseller's shop with his printing-house, I don't know but it might be worth his while to set up at Cambridge.

I enclose you some whisk seed; it is a kind of corn, good for creatures; it must be planted in hills, like Indian corn. The tops make the best thatch in the world; and of the same are made the whisks you use for velvet. Pray try if it will grow with you. I brought it from Virginia. Give some to Mr. Cooper, some to Mr. Bowdoin. Love to cousin Sally, and her spouse. I wish them and you much joy. Love to brother, &c., B. FRANKLIN.

CLII

TO WILLIAM PARSONS

PHILADELPHIA, 22 February, 1757.

DEAR FRIEND:—I thank you for the intelligence from Fort Allen relating to the Indians. The commissioners have not yet settled your account, but I will press them to do it immediately. I have not heard from Mr. Stephenson, but will write to him once more.

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And now, my dear old friend, I am to take leave of you, being ordered home to England by the Assembly, to obtain some final settlement of the points that have occasioned so many unhappy disputes. I assure you I go with the sincerest desire of procuring peace, and therein I know I shall have your prayers for my success. God bless you, and grant that at my return I may find you well and happy. I am, as ever, dear friend, yours affectionately,

B. FRANKLIN.[1]

CLIII

TO MISS CATHERINE RAY

PHILADELPHIA, 3 March, 1757.

DEAR KATY:—Being about to leave America for some time, I could not go without taking leave of my

[1] On the 29th of January, the Assembly resolved that Isaac Norris, the Speaker of the House, and Benjamin Franklin, should be requested to go to England, "as commissioners to solicit the removal of grievances occasioned by proprietary instructions, &c." When they were called upon to declare to the Assembly, whether they would comply with the request, Mr. Norris declined, and gave as a reason the state of his health. Mr. Franklin said "that he esteemed the nomination by the House to that service as a high honor, but that he thought, if the Speaker could be prevailed on to undertake it, his long experience in public affairs would render the addition of another unnecessary; that he held himself, however, in the disposition of the House, and was ready to go whenever they should think fit to require his service." It was then resolved, "that Benjamin Franklin be, and he is hereby, appointed Agent of this province, to solicit and transact the affairs thereof in Great Britain." See *Votes and Proceedings*, February 3d. His son was at this time clerk of the House, and it was resolved "that William Franklin have leave to resign his office of clerk of this House, that he may accompany his father, appointed one of the commissioners to negotiate our affairs in England, and that another person be chosen to serve as clerk during the absence of the said Franklin."—*February 18th.*

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dear friend. I received your favor of the 8th of November, and am ashamed, that I have suffered it to remain so long unanswered, especially as now, through shortness of time, I cannot chat with you in any manner agreeably.

I can only wish you well and happy, which I do most cordially. Present my best compliments to your good mamma, brother and sister Ward, and all your other sisters, the agreeable Misses Ward, Dr. Babcock and family, the charitable Misses Stanton, and, in short, to all that love me. I should have said all that love you, but that would be giving you too much trouble. Adieu, dear good girl, and believe me ever your affectionate friend, B. FRANKLIN.

CLIV

TO MR. DUNLAP

PHILADELPHIA, 4 April, 1757.

I now appoint you postmaster of Philadelphia, during our absence, as it will be some present employment for you till our return; when I hope to put you in a better way, if I find you diligent, careful, and faithful.

I would not have the office remov'd on any account from my house during my absence, without my leave first obtain'd.

And as Mrs. Franklin has had a great deal of experience in the management of the post-office, I depend on your paying considerable attention to her advice in that matter.

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As I leave but little money with Mrs. Franklin for the support of the family, and have (torn ——) of the post-office for the (torn —— ——) absence, I expect and (torn —— ——) account with her for, and pay her, every Monday morning, the postage of the preceding week, taking her receipts for the same, and retaining only your commissions of ten per cent. You should have a little book for such receipts.

Wishing you health and happiness, I am, your affectionate uncle, B. FRANKLIN.

CLV

TO MRS. DEBORAH FRANKLIN

TRENTON,[1] 5 April, 1757.

MY DEAR CHILD:—We found the roads much better than we expected, and got here well before night. My kind friend Mr. Griffith's carriage appearing too weak in the wheels, I have accepted Mr. Masters's obliging offer, and take his carriage forward from this place, and he will return to town in Mr. Griffith's. About a dozen of our friends accompanied us quite hither, to see us out of the province, and we spent a very agreeable evening together. I leave home, and undertake this long voyage, the more cheerfully, as I can rely on your prudence in the management of my affairs and education of our dear child; and yet I cannot forbear once more recommending her to you with a father's tenderest concern. My love to all. If the roads do not prove worse, we may be at Woodbridge to-night. I believe I did not see Mr. Dunlap when I

[1] On his way to New York, where he was to take passage for England.

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came away, so as to take leave of him; my love to him. Billy presents his duty and love to all. I am your affectionate husband, B. FRANKLIN.

CLVI

TO JOHN LINING, AT CHARLESTON, SOUTH CAROLINA

NEW YORK, 14 April, 1757.

SIR:—It is a long time since I had the pleasure of a line from you; and, indeed, the troubles of our country, with the hurry of business I have been engaged in on that account, have made me so bad a correspondent, that I ought not to expect punctuality in others.

But being about to embark for England, I could not quit the continent without paying my respects to you, and, at the same time, taking leave to introduce to your acquaintance a gentleman of learning and merit, Colonel Henry Bouquet, who does me the favor to present you this letter, and with whom I am sure you will be much pleased.

Professor Simson, of Glasgow, lately communicated to me some curious experiments of a physician of his acquaintance, by which it appeared that an extraordinary degree of cold, even to freezing, might be produced by evaporation. I have not had leisure to repeat and examine more than the first and easiest of them, viz.: Wet the ball of a thermometer by a feather dipped in spirit of wine, which has been kept in the same room, and has, of course, the same degree of heat or cold. The mercury sinks presently three or four degrees, and the quicker if during the evaporation you blow on the ball with the bellows; a second

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wetting and blowing, when the mercury is down, carries it yet lower. I think I did not get it lower than five or six degrees from where it naturally stood, which was, at that time, sixty. But it is said, that a vessel of water being placed in another somewhat larger, containing spirit, in such a manner that the vessel of water is surrounded with the spirit, and both placed under the receiver of an air-pump, on exhausting the air, the spirit evaporating, leaves such a degree of cold as to freeze the water, though the thermometer, in the open air, stands many degrees above the freezing point.

I know not how this phenomenon is to be accounted for; but it gives me occasion to mention some loose notions relating to heat and cold, which I have for some time entertained, but not yet reduced into any form. Allowing common fire, as well as electrical, to be a fluid capable of permeating other bodies, and seeking an equilibrium, I imagine some bodies are better fitted by nature to be conductors of that fluid than others; and that, generally, those which are the best conductors of electrical fluid, are also the best conductors of this; and *e contra*.

Thus a body which is a good conductor of fire readily receives it into its substance, and conducts it through the whole to all the parts, as metals and water do; and if two bodies, both good conductors, one heated, the other in its common state, are brought into contact with each other, the body which has most fire readily communicates of it to that which had least, and that which had least readily receives it, till an equilibrium is produced. Thus, if you take

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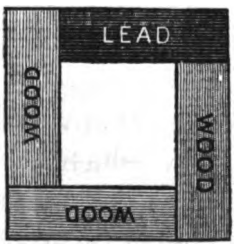
a dollar between your fingers with one hand, and a piece of wood, of the same dimensions, with the other, and bring both at the same time to the flame of a candle, you will find yourselves obliged to drop the dollar before you drop the wood, because it conducts the heat of the candle sooner to your flesh. Thus, if a silver tea-pot had a handle of the same metal, it would conduct the heat from the water to the hand, and become too hot to be used; we therefore give to a metal tea-pot a handle of wood, which is not so good a conductor as metal. But a china or stone tea-pot being in some degree of the nature of glass, which is not a good conductor of heat, may have a handle of the same stuff. Thus, also, a damp moist air shall make a man more sensible of cold, or chill him more, than a dry air that is colder, because a moist air is fitter to receive and conduct away the heat of his body. This fluid, entering bodies in great quantity, first expands them by separating their parts a little; afterwards, by farther separating their parts, it renders solids fluid, and at length dissipates their parts in air. Take this fluid from melted lead, or from water, the parts cohere again; and this is sooner done by the means of good conductors. Thus, if you take, as I have done, a square bar of lead, four inches long, and one inch thick, together with three pieces of wood planed to the same dimensions, and lay them as in the margin, on a smooth board, fixed so as not to be easily separated or moved, and pour into the cavity they



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form as much melted lead as will fill it, you will see the melted lead chill, and become firm, on the side next the leaden bar, some time before it chills on the other three sides in contact with the wooden bars, though, before the lead was poured in, they might all be suppose to have the same degree of heat or coldness, as they had been exposed in the same room to the same air. You will likewise observe that the leaden bar, as it had cooled the melted lead more than the wooden bars have done, so it is itself more heated by the melted lead. There is a certain quantity of this fluid, called fire, in every human body, which fluid, being in due proportion, keeps the parts of the flesh and blood at such a just distance from each other, as that the flesh and nerves are supple and the blood fit for circulation. If part of this due proportion of fire be conducted away, by means of a contact with other bodies, as air, water, or metals, the parts of our skin and flesh that come into such contact first draw more together than is agreeable, and give that sensation which we call cold; and if too much be conveyed away, the body stiffens, the blood ceases to flow, and death ensues. On the other hand, if too much of this fluid be communicated to the flesh, the parts are separated too far, and pain ensues, as when they are separated by a pin or lancet. The sensation that the separation by fire occasions, we call heat, or burning. My desk on which I now write and the lock of my desk are both exposed to the same temperature of the air, and have therefore the same degree of heat or cold; yet if I lay my hand successively on the wood and on the metal,

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the latter feels much the coldest, not that it is really so, but being a better conductor, it more readily than the wood takes away and draws into itself the fire that was in my skin. Accordingly, if I lay one hand, part on the lock and part on the wood, and after it has lain so some time, I feel both parts with my other hand, I find the part that has been in contact with the lock very sensibly colder to the touch than the part that lay on the wood. How a living animal obtains its quantity of this fluid, called fire, is a curious question. I have shown that some bodies (as metals) have a power of attracting it stronger than others; and I have some times suspected that a living body had some power of attracting out of the air, or other bodies, the heat it wanted. Thus metals hammered or repeatedly bent grow hot in the bent or hammered part. But when I consider that air in contact with the body cools it; that the surrounding air is rather heated by its contact with the body; that every breath of cooler air drawn in carries off part of the body's heat when it passes out again; that therefore there must be in the body a fund for producing it, or otherwise the body would soon grow cold: I have been rather inclined to think that the fluid *fire*, as well as the fluid *air*, is attracted by plants in their growth, and becomes consolidated with the other materials of which they are formed, and makes a great part of their substance; that, when they come to be digested, and to suffer in the vessels a kind of fermentation, part of the fire, as well as part of the air, recovers its fluid, active state again, and diffuses itself in the body, di-

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gesting and separating it; that the fire so reproduced by digestion and separation, continually leaving the body, its place is supplied by fresh quantities, arising from the continual separation; that whatever quickens the motion of the fluids in an animal quickens the separation, and reproduces more of the fire, as exercise; that all the fire emitted by wood and other combustibles when burning existed in them before in a solid state, being only discovered when separating; that some fossils, as sulphur, sea-coal, &c., contain a great deal of solid fire; and that, in short, what escapes and is dissipated in the burning of bodies, besides water and earth, is generally the air and fire that before made parts of the solid. Thus I imagine that animal heat arises by or from a kind of fermentation in the juices of the body, in the same manner as heat arises in the liquors preparing for distillation, wherein there is a separation of the spirituous from the watery and earthy parts. And it is remarkable that the liquor in a distiller's vat, when in its highest and best state of fermentation, as I have been informed, has the same degree of heat with the human body—that is, about 94 or 96.

Thus, as by a constant supply of fuel in a chimney you keep a warm room, so by a constant supply of food in the stomach, you keep a warm body; only, where little exercise is used, the heat may possibly be conducted away too fast, in which case such materials are to be used for clothing and bedding, against the effects of an immediate contact of the air, as are in themselves bad conductors of heat, and consequently prevent its being communicated through

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their substance to the air. Hence what is called *warmth* in wool, and its preference on that account to linen, wool not being so good a conductor; and hence all the natural coverings of animals to keep them warm are such as retain and confine the natural heat in the body, by being bad conductors, such as wool, hair, feathers, and the silk by which the silk-worm in its tender embryo state is first clothed. Clothing thus considered does not make a man warm by *giving* warmth, but by *preventing* the too quick dissipation of the heat produced in his body, and so occasioning an accumulation.

There is another curious question I will just venture to touch upon, viz.: Whence arises the sudden extraordinary degree of cold, perceptible on mixing some chemical liquors, and even on mixing salt and snow, where the composition appears colder than the coldest of the ingredients? I have never seen the chemical mixtures made; but salt and snow I have often mixed myself, and am fully satisfied that the composition feels much colder to the touch, and lowers the mercury in the thermometer more, than either ingredient would do separately. I suppose, with others, that cold is nothing more than the absence of heat or fire. Now, if the quantity of fire before contained or diffused in the snow and salt was expelled in the uniting of the two matters, it must be driven away either through the air or the vessel containing them. If it is driven off through the air, it must warm the air; and a thermometer held over the mixture, without touching it, would discover the heat by the rising of the mercury, as it must, and always does, in warm air.

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This, indeed, I have not tried, but I should guess it would rather be driven off through the vessel, especially if the vessel be metal, as being a better conductor than air; and so one should find the basin warmer after such mixture. But, on the contrary, the vessel grows cold, and even water, in which the vessel is sometimes placed for the experiment, freezes into hard ice on the basin. Now I know not how to account for this, otherwise than by supposing that the composition is a better conductor of fire than the ingredients separately, and, like the lock compared with the wood, has a stronger power of attracting fire, and does accordingly attract it suddenly from the fingers, or a thermometer put into it, from the basin that contains it, and from the water in contact with the outside of the basin; so that the fingers have the sensation of extreme cold, by being deprived of much of their natural fire; the thermometer sinks, by having part of its fire drawn out of the mercury; the basin grows colder to the touch, as, by having its fire drawn into the mixture, it is become more capable of drawing and receiving it from the hand; and, through the basin, the water loses its fire that kept it fluid, so it becomes ice. One would expect, that from all this attracted acquisition of fire to the composition, it should become warmer; and, in fact, the snow and salt dissolve at the same time into water, without freezing. I am, Sir, &c.,

B. Franklin.

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CLVII

TO MRS. JANE MECOM

NEW YORK, 19 April, 1757.

DEAR SISTER:—I wrote a few lines to you yesterday, but omitted to answer yours relating to sister Dowse. As *having their own way* is one of the greatest comforts of life to old people, I think their friends should endeavour to accommodate them in that, as well as in any thing else. When they have long lived in a house, it becomes natural to them; they are almost as closely connected with it as the tortoise with his shell; they die, if you tear them out of it; old folks and old trees, if you remove them, it is ten to one that you kill them; so let our good old sister be no more importuned on that head. We are growing old fast ourselves, and shall expect the same kind of indulgences; if we give them, we shall have a right to receive them in our turn.

And as to her few fine things, I think she is in the right not to sell them, and for the reason she gives, that they will fetch but little; when that little is spent, they would be of no further use to her; but perhaps the expectation of possessing them at her death may make that person tender and careful of her, and helpful to her to the amount of ten times their value. If so, they are put to the best use they possibly can be.

I hope you visit sister as often as your affairs will permit, and afford her what assistance and comfort you can in her present situation. *Old age*, *infirmities*, and *poverty*, joined, are afflictions enough. The

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neglect and *slights* of friends and near relations should never be added. People in her circumstances are apt to suspect this sometimes without cause; *appearances* should therefore be attended to, in our conduct towards them, as well as *realities*. I write by this post to cousin Williams, to continue his care, which I doubt not he will do.

We expect to sail in about a week, so that I can hardly hear from you again on this side the water; but let me have a line from you now and then, while I am in London. I expect to stay there at least a twelvemonth. Direct your letters to be left for me at the Pennsylvania Coffee-house, in Birchin Lane, London. My love to all, from, dear sister, your affectionate brother,

B. FRANKLIN.

P. S.—April 25th. We are still here, and perhaps may be here a week longer. Once more adieu, my dear sister.

CLVIII

TO MRS. JANE MECOM

WOODBRIDGE, NEW JERSEY, 21 May, 1757.

DEAR SISTER:—I received your kind letter of the 9th instant, in which you acquainted me with some of your late troubles. These are troublesome times to us all; but perhaps you have had more than you should. I am glad to hear that Peter is at a place where he has full employ. A trade is a valuable

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thing; but unless a habit of industry be acquired with it, it turns out of little use; if he gets *that* in his new place, it will be a happy exchange, and the occasion not an unfortunate one. It is very agreeable to me to hear so good an account of your other children; in such a number to have no bad ones is a great happiness.

The horse sold very low indeed. If I wanted one to-morrow, knowing his goodness, old as he is, I should freely give more than twice the money for him; but you did the best you could, and I will take of Benny no more than he produced.

I don't doubt but Benny will do very well when he gets to work; but I fear his things from England may be so long a coming as to occasion the loss of the rent. Would it not be better for you to move into the house? Perhaps not, if he is near being married. I know nothing of that affair but what you write me, except that I think Miss Betsey a very agreeable, sweet-tempered, good girl, who has had a housewifely education, and will make, to a good husband, a very good wife. Your sister and I have a great esteem for her; and if she will be kind enough to accept of our nephew, we think it will be his own fault if he is not as happy as the married state can make him. The family is a respectable one, but whether there be any fortune I know not; and as you do not inquire about this particular, I suppose you think with me, that where every thing else desirable is to be met with, that is not very material. If she does not *bring* a fortune, she will help to *make* one. Industry, frugality, and prudent

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economy in a wife, are to a tradesman, in their effects, a fortune; and a fortune sufficient for Benjamin, if his expectations are reasonable. We can only add that if the young lady and her friends are willing, we give our consent heartily, and our blessing. My love to brother and the children. Your affectionate brother,

B. FRANKLIN.

P. S.—If Benny will promise to be one of the tenderest husbands in the world, I give my consent. He knows already what I think of Miss Betsey. I am his loving aunt,

DEBORAH FRANKLIN.

CLIX

TO MRS. DEBORAH FRANKLIN

NEW YORK, Friday, 27 May, 1757.

MY DEAR DEBBY:—Mr. Parker being doubtful this morning whether the rain would permit his setting out to-day, I had prepared no letter to send by Sally, when he took a sudden resolution to go. Mr. Colden [1] could not spare his daughter, as she helps him in the post-office, he having no clerk. I enclose only the fourth bills, which you are to put up safe with my writings. The first set I take with me, the second goes by Radford, and I now send the third by Bonnel.

All the packets are to sail together with the fleet,

[1] Mr. Alexander Colden, the postmaster in New York.

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but when that will be is yet uncertain; for yesterday came in three privateers with several prizes, and by them there is advice that the French fleet, which was in the West Indies, is come to the northward; and now it is questioned whether it will be thought prudent for these transports to sail till there is certain advice that the grand fleet is arrived from England. This, however, is only town talk.

I send Mr. Kneeland's letter. Pray forward the paper he writes for, by the first opportunity. I send a memorandum received from Joseph Croker, with a note on the back of it. I leave it to yourself whether to go home directly, or stay a little longer. If I find we are not likely to sail for some time, I shall perhaps step down again to Woodbridge, and try to finish my work. But it may be that your longer absence from home will be attended with some inconvenience. I am making up a bundle of papers to send you. Put them into my room. I can hear nothing yet of the clothes.

I have been very low-spirited all day. This tedious state of uncertainty and long waiting have almost worn out my patience. Except the two or three weeks at Woodbridge, I know not when I have spent time so uselessly as since I left Philadelphia.

I left my best spectacles on the table. Please to send them to me.

Saturday Morning.—Jemmy got here early, and tells me Mr. Parker and the children got well down. In my room on the folio shelf between the clock and our bedchamber, stands a folio, called the *Gardiner's Dictionary, by P. Miller.* And on the same side of

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the room, on the lowest shelf or lowest but one, near the middle, and by the side of a little partition, you will find standing or rather lying on its fore edge a quarto pamphlet, covered with blue paper, called a *Treatise on Cider-making*. Deliver those two books to Mr. Parker.

Sunday Afternoon.—Yesterday, while I was at my Lord's,[1] with whom I had the honor to dine, word was brought in that five sail of French men-of-war were seen off Egg Harbour the day before; and as some of the French prisoners lately brought in report that such a number of men-of-war sailed with them from the West Indies to go to the northward, these vessels might be supposed to be the same, if the account from Egg Harbour was true. If on examination it be found true, and the French take it into their heads to cruise off this port with such a force, we shall then be shut up here for some time, for our fleet here is not of force sufficient to venture out. If this story be not true, yet it is thought by some we shall hardly sail till there is certain advice of the English fleet being arrived at Halifax, and perhaps not till a convoy comes from thence to guard us. So I am wavering whether I had not best go down again to Woodbridge and finish my books.

I spent last evening with Mr. Nichol's family, who all desired their compliments to you and Sally. I send you one of the French books translated.

Monday Morning.—Our going is yet uncertain. I believe I shall put every thing on board to-morrow,

[1] Lord Loudoun, who had lately arrived as commander-in-chief in America, being successor to General Shirley.

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and either go down again to Woodbridge or send for the trunk of books hither to employ myself till we have sailed. The report of French men-of-war off the coast is vanished. I am, my dear Debby, your ever loving husband,

B. FRANKLIN.

CLX

TO ISAAC NORRIS [1]

NEW YORK, 30 May, 1757.

SIR:—After waiting here about seven weeks for the sailing of the packet, the time of her sailing is no more certain now than it was on the day of our arrival. The packets, as it is now said, are all three to sail with the fleet; the two first to be dismissed soon after the fleet is at sea; the third to go with the fleet to the place of rendezvous, and not to be discharged till the arrival and junction of the fleet from England. But this is not certain; resolutions change as advices are received, or occurrences arise, and it is doubtful whether the fleet will sail from hence till there is certain news of the arrival of that from England, since there is intelligence that Beaufremont's squadron is gone from the West Indies to the northward.

I have had the honor of several conferences with my Lord Loudoun on the subject of the servants.[2]

[1] For many years Speaker of the Assembly of Pennsylvania.

[2] It was common for emigrants, of the poorer class, to pay for their passage by selling their time for a certain number of years to the captain in whose ship they came over. The time, or term of service,

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His Lordship objects, first, that it appears by the list which I laid before him, that many of the servants were enlisted in General Braddock's and General Shirley's time. With those he has nothing to do. Secondly, that many were enlisted before the act of Parliament appointed satisfaction to be made to the masters; and as the lawyers all agree that the right to take them without pay was clearly in the King before the act, no satisfaction should be made or expected for these. Thirdly, that the particular proofs of the loss of each servant, and of his being enlisted in the King's service, do not appear. Fourthly, that the affair is now so intricate and perplexed, that it would take more time to examine and settle it than he can possibly spare. Fifthly, that if his officers had done wrong in not paying for the servants, as they took them, the fault was our own; it was owing to some principal people among ourselves, whom he could name, who had always assured the officers that the Assembly intended to pay for the servants, and by that means led them into the error.

His Lordship made several other observations and objections, all which I answered and endeavoured to remove as well as I could; but there is, I believe,

thus pledged, was sold by the captain, after his arrival in port, to farmers in the country. During the war it had been a practice of the recruiting officers to enlist these servants into the army, thus depriving the farmers of their services, and of the value that had been paid for them. Redress was sought from the government, and Franklin was instructed to lay the subject before Lord Loudoun, the commander-in-chief of the army. Other particulars respecting emigrant servants, and the enlistment of them, may be seen in Sparks' edition of *Washington's Writings*, vol. ii., pp. 168, 189, 199.

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one at bottom, which it is not in my power to remove, and that is the want of money. The expenses of an American war necessarily run very high, and are complained of by some in England; and his Lordship is unwilling to discourage the ministry at home by large charges. He will therefore mix none of those of his predecessors with his own. He makes the most frugal agreements, and avoids all payments that he can avoid with honor. For instance, there is a balance not very large due to me, on my account of wagons and forage supplies to General Braddock. I presented the account to his Lordship, who had it examined and compared with the vouchers; and on report made to him that it was right, ordered a warrant to be drawn for the payment; but before he signed it he sent for me, told me that as the money became due before his time, he had rather not mix it in his accounts, if it would be the same thing to me to receive it in England. He believed it a fair and just account, and as such would represent it at home, so that I should meet with no difficulty in getting it paid there. I agreed to his Lordship's proposal, and the warrant was laid aside.

I once proposed to his Lordship that if he would appoint, or advise Governor Denny to appoint, some persons of credit in Pennsylvania to examine the claims of the masters, and report to his Lordship at the end of the campaign, it would, for the present, make the minds of the sufferers more easy; and he could then order payment for such part as he should find right for him to pay, and we might endeavour to procure satisfaction elsewhere for the rest. His

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Lordship declined this, saying, that he knew not whom to appoint, being unacquainted with the people; that he did not care to trouble Governor Denny with it, of whom he must ask it as a favor; and besides, auditors, in the plantations, of accounts against the crown had in many instances been so partial and corrupt that they had lost all credit. If he appointed auditors, they must be some of the officers of the army who understood the affair; and at present they were engaged in other duties.

I will not trouble you with a detail of all I said to his Lordship on this affair, though I omitted nothing material that occurred to me; but I find he is for keeping the matter in suspense, without either promising payment or refusing to pay; perhaps till he receives directions about it from home. He does not seem willing, however, that I should make any application there relating to it, and chooses to keep the list in his hands till his return from the campaign.

The list is, indeed, so very imperfect, that I could not promise myself much in laying it before him. Of many servants it is not noted by what officers, or in what company, or even in what regiment they were enlisted; of others, the time they were bound for, or had served, or had still to serve, is omitted. Of others, no notice is taken of the price they cost; nor is there any distinction of apprentices, though, perhaps, the account is the best that could be obtained, the time and other circumstances considered. Upon the whole, as the inquiry, if it is ever made by my Lord's order, will be by officers of the army, they

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being, in his Lordship's opinion, the fittest persons and most impartial; as all enlistments before the commencement of his command will be rejected, and also all before the act of Parliament; as very clear proofs of every circumstance—when the servant was enlisted, by what officer, of what regiment, and the like—will be insisted on, and the recruiting officers at the time took such effectual care to prevent the master's knowing any thing of these circumstances, I am inclined to think very little benefit will be produced by such inquiry; and that our application at home for some allowance on that account will be better founded on what the Assembly, after their own inquiry, have thought themselves obliged to pay, than on such an imperfect list as has been sent to me. This, however, I submit; and if it should still be thought proper to apply in England on the footing of the list, another copy must be forwarded by some future opportunity.

His Lordship has on all occasions treated me with the greatest goodness, but I find frequently that wrong prejudices are infused into his mind against our province. We have too many enemies among ourselves, but I hope in time things will wear a better face. Please to present my humble respects to the House, and believe me, with great esteem, &c.,

B. Franklin.

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CLXI

TO MRS. JANE MECOM

NEW YORK, 30 May, 1757.

DEAR SISTER:—I have before me yours of the 9th and 16th instant. I am glad you have resolved to visit sister Dowse oftener; it will be a great comfort to her to find she is not neglected by you, and your example may, perhaps, be followed by some others of her relations.

As Neddy is yet a young man, I hope he may get over the disorder he complains of, and in time wear it out. My love to him and his wife and the rest of your children. It gives me pleasure to hear that Eben is likely to get into business at his trade. If he will be industrious and frugal, it is ten to one but he gets rich, for he seems to have spirit and activity.

I am glad that Peter is acquainted with the crown-soap business so as to make what is good of the kind. I hope he will always take care to make it faithfully, and never slight the manufacture, or attempt to deceive by appearances. Then he may boldly put his name and mark, and in a little time it will acquire as good a character as that made by his late uncle, or any other person whatever. I believe his aunt at Philadelphia can help him to sell a good deal of it; and I doubt not of her doing every thing in her power to promote his interest in that way. Let a box be sent to her (but not unless it be right good), and she will immediately return the ready money for it. It was beginning once to be in vogue in Philadelphia, but brother John sent me

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one box, an ordinary sort, which checked its progress. I would not have him put the Franklin arms on it, but the soapboilers' arms he has a right to use, if he thinks fit. The other would look too much like an attempt to counterfeit. In his advertisements he may value himself on serving his time with the original maker, but his own mark or device on the papers, or any thing he may be advised to as proper; only on the soap, as it is called by the name of crown-soap, it seems necessary to use a stamp of that sort, and perhaps no soapboiler in the King's dominions has a better right to the crown than himself.

Nobody has wrote a syllable to me concerning his making use of the hammer, or made the least complaint of him or you. I am sorry, however, that he took it without leave. It was irregular, and if you had not approved of his doing it, I should have thought it indiscreet. *Leave*, they say, *is light*, and it seems to me a piece of respect that was due to his aunt, to ask it, and I can scarce think she would have refused him the favor.

I am glad to hear Johnny is so good and diligent a workman. If he ever sets up at the goldsmith's business, he must remember that there is one accomplishment without which he cannot possibly thrive in that trade—that is, *perfect honesty*. It is a business that, though ever so uprightly managed, is always liable to suspicion; and if a man is once detected in the smallest fraud, it soon becomes public, and every one is put upon his guard against him; no one will venture to try his wares, or trust him to

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make up his plate; so at once he is ruined. I hope my nephew will, therefore, establish a character as an *honest* and faithful as well as *skilful* workman, and then he need not fear for employment.

And now, as to what you propose for Benny, I believe he may be, as you say, well enough qualified for it; and when he appears to be settled, if a vacancy should happen, it is very probable he may be thought of to supply it; but it is a rule with me not to remove any officer that behaves well, keeps regular accounts, and pays duly; and I think the rule is founded on reason and justice. I have not shown any backwardness to assist Benny, where it could be done without injuring another. But if my friends require of me to gratify not only their inclinations, but their resentments, they expect too much of me. Above all things I dislike family quarrels, and when they happen among my relations, nothing gives me more pain. If I were to set myself up as a judge of those subsisting between you and brother's widow and children, how unqualified must I be, at this distance, to determine rightly, especially having heard but one side. They always treated me with friendly and affectionate regard; you have done the same. What can I say between you, but that I wish you were reconciled, and that I will love that side best that is most ready to forgive and oblige the other? You will be angry with me here, for putting you and them too much upon a footing; but I shall nevertheless be, dear sister, your truly affectionate brother,

B. FRANKLIN.

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CLXII

TO MRS. DEBORAH FRANKLIN

New York, 2 June, 1757.

My Dear Child:—I have just received yours of the 29th. You do not tell me whether you take the trunk of books with you, but I suppose you do. It is now said we are all to go on board to-morrow, and sail down to the Hook. I hope it will be so, for, having now nothing to do, my stay here is extremely tedious. Please to give my respects to Mrs. Moore, and assure her that I will take care of her letters. You will find sundry parcels that came from London, some directed to the Library Company, some for Mr. Bartram. Deliver them, if not delivered. Desire Mr. Normandy to send after me a fresh memorandum of what he wanted, Mr. Collinson having lost the former.

I hope my dear Sally will behave in every thing to your satisfaction, and mind her learning and improvement. As my absence will make your house quieter, and lessen your business, you will have the more leisure to instruct her and form her. I pray God to bless you both, and that we may once more have a happy meeting. God preserve, guard, and guide you.

It is a doubt whether your next letters will reach us here. Billy joins with me in love to all friends, and presents his duty to you and love to his sister. My duty to mother and love to all the family. I shall endeavour to write to you once more before we sail, being as ever, my dear child, your affectionate husband,

B. Franklin.

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CLXIII

TO MRS. DEBORAH FRANKLIN

LONDON, 27 July, 1757.

MY DEAR CHILD:—We arrived here well last night, only a little fatigued with the last day's journey, being seventy miles. I write only this line, not knowing of any opportunity of sending it; but Mr. Collinson will inquire for one, as he is going out. If he finds one, I shall write more largely. I have just seen Mr. Strahan, who is well, with his family. Billy is with me here at Mr. Collinson's, and presents his duty to you and love to his sister. My love to all. I am, my dear child, your loving husband,

B. FRANKLIN.[1]

CLXIV

TO MRS. DEBORAH FRANKLIN

London, 22 November, 1757.

MY DEAR CHILD:—During my illness, which continued near eight weeks, I wrote you several little letters, as I was able. The last was by the packet which sailed from Falmouth above a week since. In that I informed you that my intermittent fever, which had continued to harass me by frequent

[1] The packet in which he sailed was bound to Falmouth. In his autobiography, after describing the voyage, his narrow escape from shipwreck on the Scilly rocks, and his arrival in port, he adds: "I set out immediately, with my son, for London, and we only stopped a little by the way to view Stonehenge, on Salisbury Plain, and Lord Pemberton's house and gardens, with the very curious antiquities at Wilton."

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relapses, was gone off, and I have ever since been gathering strength and flesh. My doctor, Fothergill, who had forbid me the use of pen and ink, now permits me to write as much as I can without over fatiguing myself, and therefore I sit down to write more fully than I have hitherto been able to do.

The 2d of September I wrote to you that I had had a violent cold and something of a fever, but that it was almost gone. However, it was not long before I had another severe cold, which continued longer than the first, attended by great pain in my head, the top of which was very hot, and when the pain went off, very sore and tender. These fits of pain continued sometimes longer than at others; seldom less than twelve hours, and once thirty-six hours. I was now and then a little delirious; they cupped me on the back of the head, which seemed to ease me for the present; I took a great deal of bark, both in substance and infusion, and too soon thinking myself well, I ventured out twice, to do a little business and forward the service I am engaged in, and both times got fresh cold and fell down again. My good doctor grew very angry with me for acting contrary to his cautions and directions, and obliged me to promise more observance for the future. He attended me very carefully and affectionately; and the good lady of the house nursed me kindly.[1] Billy

[1] This lady was Mrs. Margaret Stevenson, who kept a boarding-house in Craven Street, near the Strand, and with whom Dr. Franklin lived during the whole fifteen years of his residence in London. For Mrs. Stevenson and her daughter, Miss Mary Stevenson, who at this time was eighteen years old, he formed a strong attachment, which continued through life. His first acquaintance with Mrs. Steven-

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was also of great service to me, in going from place to place, where I could not go myself, and Peter was very diligent and attentive. I took so much bark in various ways, that I began to abhor it; I durst not take a vomit, for fear of my head; but at last I was seized one morning with a vomiting and purging, the latter of which continued the greater part of the day, and I believe was a kind of crisis to the distemper, carrying it clear off; for ever since I feel quite lightsome, and am every day gathering strength; so I hope my seasoning is over, and that I shall enjoy better health during the rest of my stay in England.

son was accidental, he being recommended to her house by some of his Pennsylvania friends who had boarded there. Miss Stevenson was a girl of excellent sense, and of a highly cultivated mind, and some of his best letters on philosophical and other subjects were written to her. In the London Guide Books, "No. 7 Craven Street," is still indicated as the house in which Dr. Franklin resided.

Miss Stevenson's time was mostly passed in the country with Mrs. Tickell, her aunt; and this absence from her mother's house was the cause of the correspondence between her and Dr. Franklin, who recommended books for her reading, directed her studies, and answered her philosophical inquiries. She was married in the year 1770 to William Hewson, a distinguished anatomist, who is known by his numerous papers in the *Philosophical Transactions*, and particularly by his work on the *Lymphatic System*. As a reward for his anatomical discoveries he was honored with the Copley Medal. He was likewise elected a fellow of the Royal Society. He died in 1774, thus terminating a brilliant career at the early age of thirty-four. His widow was left with three infant children. In the meantime her fortune was increased by the death of an aunt, and she devoted herself to the care of her mother and the education of her children. Mrs. Stevenson, her mother, died in January, 1783. Mrs. Hewson continued to reside in England till 1786, when she came over with her children to Philadelphia. She lived there till 1792, and then removed to Bristol in Pennsylvania, where her eldest son had established himself, and where she died, on the 14th of October, 1795. This son went afterwards to Vera Cruz, and died there in 1802. Her grandchildren are still living (1886) in Philadelphia.

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I thank you for writing to me so frequently and fully. I believe I have missed none of your letters yet, but those by Lyon, who was taken. You mention Mr. Scott's being robbed, but do not say to what value. Was it considerable? I have seen Mr. Ralph, and delivered him Mrs. Garrigues's letter. He is removed from Turnham Green. When I return, I will tell you every thing relating to him. In the mean time I must advise Mrs. Garrigues not to write to him again, till I send her word how to direct her letters, he being unwilling, for some good reasons, that his present wife should know any thing of his having any connexions in America. He expresses great affection for his daughter and grandchildren. He has but one child here.

I have found David Edwards, and send you some of his letters, with one for his father. I am glad to hear that our friends at Newark got well through the smallpox.

The above particulars are in answer to things mentioned in your letters, and so are what follow.

Governor Shirley's affairs are still in an uncertain state; he is endeavouring to obtain an inquiry into his conduct, but the confusion of public affairs occasions it to be postponed. He and I visit frequently. I make no doubt but reports will be spread by my enemies to my disadvantage, but let none of them trouble you. If I find I can do my country no good, I will take care at least not to do it any harm; I will neither seek nor expect any thing for myself; and, though I may perhaps not be able to obtain for the people what they wish and expect, no interest shall

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induce me to betray the trust they have reposed in me; so make yourself quite easy in regard to such reports.

Mr. Hunter is better than he has been for a long time. He and his sister desire to be remembered to you. I believe I left the seal with Mr. Parker. I am glad to hear that Mr. Boudinot has so seasonable a supply, and hope he will not go to mining again. I am obliged to all my friends that visit you in my absence. My love to them.

Mr. Ralph delivered me your letters very obligingly; he is well respected by people of value here. I thank you for sending me brother Johnny's journal; I hope he is well, and sister Read and the children. I am sorry to hear of Mr. Burt's death. He came to me at New York with a proposal that I did not approve of, but it showed his good will and respect for me; when I return, I will tell you what it was. I shall entertain Mr. Collinson and Dr. Fothergill with your account of Teedyuskung's visit.

I should have read Sally's French letter with more pleasure, but that I thought the French rather too good to be all her own composing. I suppose her master must have corrected it. But I am glad she is improving in that and her music; I send her a French *Pamela*.

You were very lucky in not insuring the rum. We are obliged to Mr. Booth for his care in that remittance. I suppose you have wrote to acknowledge the receipt of it. I have not yet seen Mr. Burkett. I am not much surprised at Green's behaviour; he has not an honest principle, I fear. I have not yet

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seen Mr. Walsteinholme, but he is arrived. I am glad you went to Elizabethtown, and that Ben has got that good girl. I hope they will do well. When you write, remember my love to her.

December 3d.—I write by little and little as I can find time. I have now gone through all your agreeable letters, which give me fresh pleasure every time I read them. Last night I received another, dated October 16th, which brings me the good news that you and Sally were got safe home; your last, of the 9th, being from Elizabethtown. Budden's ship is not yet come up to London, but is daily expected, having been some time at Cowes. Mr. Hall has sent me a bill, as you mention. Mr. Walsteinholme is come to town, and I expect to see him to-day. When I have inquired how things are with Green, I shall write some directions to you what to do in the affair.

I am glad to hear that Miss Ray is well, and that you correspond. It is not convenient to be forward in giving advice in such cases. She has prudence enough to judge for herself, and I hope she will judge and act for the best.

I hear there has a miniature painter gone over to Philadelphia, a relation to John Reynolds. If Sally's picture is not done to your mind by the young man, and the other gentleman is a good hand and follows the business, suppose you get Sally's done by him, and send it to me with your small picture, that I may here get all our little family drawn in one conversation piece. I am sorry to hear of the general sickness; I hope it is over before this time, and that little Franky is recovered.

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I was as much disappointed in my intention of writing by the packet as you were in not receiving letters, and it has since given me a great deal of vexation. I wrote to you by way of New York the day after my arrival in London, which I do not find you have received.

I do not use to be a backward correspondent, though my sickness has brought me behindhand with my friends in that respect. Had I been well, I intended to have gone round among the shops, and bought some pretty things for you and my dear good Sally (whose little hands you say eased your head-ache), to send by this ship, but I must now defer it to the next, having only got a crimson satin cloak for you, the newest fashion, and the black silk for Sally; but Billy sends her a scarlet feather, muff, and tippet, and a box of fashionable linen for her dress. In the box is a thermometer for Mr. Taylor, and one for Mr. Schlatter, which you will carefully deliver; as also a watch for Mr. Schlatter. I shall write to them. The black silk was sent to Mr. Neates, who undertook to forward it in some package of his.

It is now twelve days since I began to write this letter, and I still continue well, but have not yet quite recovered my strength, flesh, or spirits. I every day drink a glass of infusion of bark in wine, by way of prevention, and hope my fever will no more return. On fair days, which are but few, I venture out about noon. The agreeable conversation I meet with among men of learning, and the notice taken of me by persons of distinction, are the principal

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things that soothe me for the present under this painful absence from my family and friends. Yet those would not keep me here another week, if I had not other inducements—duty to my country, and hopes of being able to do it service.

Pray remember me kindly to all that love us, and to all that we love. It is endless to name names. I am, my dear child, your loving husband,

B. FRANKLIN.

CLXV

FROM WILLIAM STRAHAN TO MRS. FRANKLIN [1]

LONDON, 13 December, 1757.

DEAR MADAM:—I will not write to you, for the future, as a stranger whom I never had the happiness of seeing, but as to one with whom I have been for some time acquainted; for, having had the pleasure for several months past to be personally known to what you will readily allow to be your better half, you will permit me to fancy I am by no means ignorant of the essential qualities of the other.

I had for many years conceived a very high, and now find a very just, opinion of Mr. Franklin. This I was naturally led to by the concurring testimony

[1] Mr. Strahan was printer to the King, in which station he acquired a handsome fortune. He was eminent for his talents and character. In the year 1775, he was elected to Parliament from the borough of Malmesbury, as a colleague of Mr. Fox. He died the 9th of July, 1785, at the age of 70. A long and close intimacy subsisted between him and Dr. Franklin, and much of their correspondence, which was voluminous, has been preserved, though but a small portion of Strahan's has been printed.

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of everybody who knew him (for the voice of his enemies, if he ever had any, never reached me), and by the opportunities I have had of judging for myself, during my correspondence with him for a dozen years. But though the notion I had formed of him, in my own mind, before I had the pleasure of seeing him, was really, as far as it went, just enough, I must confess it was very unequal to what I know his singular merit deserves.

I own it is somewhat odd to entertain a lady with the character of her husband, who must herself, of all others, be the least ignorant in that particular. But as all who know me know that I cannot help speaking my sentiments freely on any subject that strikes me in a great degree, so I choose to write my mind in regard to Mr. Franklin, before all others, to you, because you are the most unexceptionable judge of the truth and propriety of what I say, and because I am persuaded you will listen to me, not only with patience but with pleasure; and indeed, whatever your own personal qualities may be, however amiable and engaging in my mind, your being the choice of such a man must add greatly to your honor. To be the wife of one who has so much ability, inclination, and success, if you view him in a public capacity, in being eminently useful to his country, must necessarily confer on you great reputation; and to be the bosom friend of one who is equally fitted to promote any kind of domestic happiness, must as necessarily be the constant spring of the most substantial comfort to you.

For my own part, I never saw a man who was, in

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every respect, so perfectly agreeable to me. Some are amiable in one view, some in another, he in all. Now, Madam, as I know the ladies here consider him in exactly the same light I do, upon my word I think you should come over, with all convenient speed, to look after your interest; not but that I think him as faithful to his Joan as any man breathing; but who knows what repeated and strong temptation may in time, and while he is at so great a distance from you, accomplish? Besides, what a delightful expedition would this be to Miss Franklin, and how must it amuse and improve her, to see and live a while in this great city. I know you will object to the length of the voyage and the danger of the seas; but truly this is more terrible in apprehension than in reality. Of all the ways of travelling, it is the easiest and most expeditious; and, as for the danger, there has not a soul been lost between Philadelphia and this, in my memory; and I believe not one ship taken by the enemy.

Is the trouble and risk, then, of such a voyage to be compared in any degree with the pleasure it will afford you and your best friends? By no means. Instead of being afraid of the sea, we ought to have a particular regard for it, as it is so far from being a bar to the communication and intercourse of different and far distant countries, that it facilitates their correspondence in a very high degree. Nay more, it conveys in the floating castles of your mother country that protection and assistance which I trust will soon give peace to your borders. I might urge as an additional inducement for you to come over in the

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spring, that the important business with which Mr. Franklin is charged in the service of his country (which I dare say you would wish above all things may be brought to a happy conclusion) may very probably detain him more than one season, which will exhaust your patience to such a degree, that you may repent, when too late, you did not listen to my advice.

Your son I really think one of the prettiest young gentlemen I ever knew from America. He seems to me to have a solidity of judgment not very often to be met with in one of his years. This, with the daily opportunities he has of improving himself in the company of his father, who is at the same time his friend, his brother, his intimate and easy companion, affords an agreeable prospect that your husband's virtues and usefulness to his country may be prolonged beyond the date of his own life.

Your daughter (I wish I could call her mine), I find by the reports of all who know her, is a very amiable girl in all respects; but of her I shall say nothing till I have the pleasure of seeing her. Only I must observe to you, that being mistress of such a family is a degree of happiness perhaps the greatest that falls to the lot of humanity. I sincerely wish you very long the unabated enjoyment of them. I leave it to your friend to write you every thing from this place you would desire to know. But I cannot take my leave without informing you that Mr. Franklin has the good fortune to lodge with a very discreet gentlewoman who is particularly careful of him, who attended him during a very severe

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cold he was some time ago seized with, with an assiduity, concern, and tenderness which perhaps only yourself could equal, so that I don't think you could have a better substitute till you come over to take him under your own protection. He is now perfectly recovered.

My own family are, I thank God, just now in perfect health. My wife joins me in kindest compliments to you and dear Miss, not forgetting her honest son David [1] and his fireside. I wish you a speedy and happy meeting with your friends on this side the water, which will give great pleasure to, dear Madam, your most affectionate humble servant,

WILLIAM STRAHAN.

CLXVI

TO JOHN PRINGLE [2]

CRAVEN STREET, 21 December, 1757.

SIR:—In compliance with your request, I send you the following account of what I can at present recollect relating to the effects of electricity in paralytic cases which have fallen under my observation.

Some years since, when the newspapers made mention of great cures performed in Italy and Germany by means of electricity, a number of paralytics were brought to me from different parts of Pennsylvania, and the neighbouring provinces, to be electrized, which I did for them at their request. My

[1] David Hall, the partner of Franklin in the printing business.

[2] Afterwards Sir John Pringle, and President of the Royal Society.

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method was to place the patient first in a chair, on an electric stool, and draw a number of large strong sparks from all parts of the affected limb or side. Then I fully charged two six gallon glass jars, each of which had about three square feet of surface coated; and I sent the united shock of these through the affected limb or limbs, repeating the stroke commonly three times each day. The first thing observed was an immediate greater sensible warmth in the lame limbs that had received the stroke than in the others; and the next morning the patients usually related that they had in the night felt a pricking sensation in the flesh of the paralytic limbs; and would sometimes show a number of small red spots, which they supposed were occasioned by those prickings. The limbs, too, were found more capable of voluntary motion, and seemed to receive strength. A man, for instance, who could not the first day lift the lame hand from off his knee, would the next day raise it four or five inches; the third day, higher; and on the fifth day was able, but with a feeble, languid motion, to take off his hat. These appearances gave great spirits to the patients, and made them hope a perfect cure; but I do not remember that I ever saw any amendment after the fifth day; which the patients perceiving, and finding the shocks pretty severe, they became discouraged, went home, and in a short time relapsed; so that I never knew any advantage from electricity in palsies, that was permanent. And how far the apparent, temporary advantage might arise from the exercise in the patients' journey, and coming daily to my house, or from the

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spirits given by the hope of success, enabling them to exert more strength in moving their limbs, I will not pretend to say.

Perhaps some permanent advantage might have been obtained if the electric shocks had been accompanied with proper medicine and regimen, under the direction of a skilful physician. It may be, too, that a few great strokes, as given in my method, may not be so proper as many small ones; since by the account from Scotland of a case in which two hundred shocks from a phial were given daily, it seems that a perfect cure has been made. As to any uncommon strength supposed to be in the machine used in that case, I imagine it could have no share in the effect produced; since the strength of the shock from charged glass is in proportion to the quantity of surface of the glass coated; so that my shocks from those large jars must have been much greater than any that could be received from a phial held in the hand.

I am, with great respect, Sir,

Your most obedient servant,

B. FRANKLIN.

CLXVII

TO JOHN PRINGLE

CRAVEN STREET, 6 January, 1758.

SIR:—I return you Mr. Mitchell's paper on the strata of the earth, with thanks. The reading of it,

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and perusal of the draft that accompanies it, have reconciled me to those convulsions which all naturalists agree this globe has suffered. Had the different strata of clay, gravel, marble, coals, limestone, sand, minerals, &c., continued to lie level, one under the other, as they may be supposed to have done before those convulsions, we should have had the use only of a few of the uppermost of the strata, the others lying too deep and too difficult to be come at; but, the shell of the earth being broke, and the fragments thrown into this oblique position, the disjointed ends of a great number of strata of different kinds are brought up to day, and a great variety of useful materials put into our power, which would otherwise have remained eternally concealed from us. So that what has been usually looked upon as a *ruin* suffered by this part of the universe, was, in reality, only a preparation, or means of rendering the earth more fit for use, more capable of being to mankind a convenient and comfortable habitation.

I am, Sir, with great esteem, yours, &c.,

B. Franklin.

CLXVIII

TO MRS. DEBORAH FRANKLIN

London, 14 January, 1758.

Dear Debby:—I wrote a very long letter to you lately, two whole sheets full, containing answers to all yours received during my sickness. I have since

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received your kind favors of November 13th and 16th. It has given me great concern, that you should be so disappointed in having no letters by Captain Lutwidge. You know by this time how it happened; but I wonder you should expect letters from me by the way of Ireland, it being quite out of my knowledge when vessels are to sail from thence.

I am thankful to God for sparing my little family in that time of general sickness, and hope to find them all well at my return. The New York paper you sent me was the latest that came, and of use to our friend Strahan. He has offered to lay me a considerable wager, that a letter he has wrote to you will bring you immediately over hither; but I tell him I will not pick his pocket; for I am sure there is no inducement strong enough to prevail with you to cross the seas. I should be glad if I could tell you when I expected to be at home, but that is still in the dark; it is possible I may not be able to get away this summer; but I hope, if I stay another winter, it will be more agreeable than the greatest part of the time I have hitherto spent in England. But, however, I must bring my business to some conclusion.

I received Sally's letter of November 12th, but cannot now write to her. I wrote to my friends generally by the last packet, and shall write to them again by a ship of Mr. Ralph's, to sail from here in about a fortnight. I am not yet quite so hearty as before my illness; but I think I am daily stronger and better, so I hope I have had my seasoning; but much writing still disorders me.

My duty to mother, and love to Sally, Debby, Mr.

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Dunlap, and all friends that inquire after me. I am, my dear child, your ever loving husband,

B. FRANKLIN.

P. S.—Billy presents his duty to you and mother, and love to his sister.

CLXIX

TO MRS. DEBORAH FRANKLIN

LONDON, 21 January, 1758.

MY DEAR CHILD:—Mr. Lorimer, a friend who is going over to General Abercromby, to assist him as secretary, called on me just now to acquaint me that he is on the point of setting out. I seize a minute or two just to let you know we are well, that is, I am well, compared to what I have been during a great part of the time since my arrival, and I hope with the spring to recover my full strength. Billy is quite hearty, and presents his duty, love, &c.

I have wrote to you by several opportunities lately, and particularly one long letter of two sheets, which I hope will come to hand, as it contained a full answer to a number of yours received during my illness, and I have no copy of it.

I begin to think I shall hardly be able to return before this time twelve months. I am for doing effectually what I came about; and I find it requires both time and patience. You may think, perhaps, that I can find many amusements here to pass the time agreeably. It is true, the regard and friendship

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I meet with from persons of worth, and the conversation of ingenious men, give me no small pleasure; but, at this time of life, domestic comforts afford the most solid satisfaction, and my uneasiness at being absent from my family, and longing desire to be with them, make me often sigh in the midst of cheerful company.

My love to my dear Sally. I confide in you the care of her and her education. I promise myself the pleasure of finding her much improved at my return. While I am writing, three letters came in, one from Mr. Hall, one from Mr. Rhoads, another from Dr. Bond, but none from you. They are by way of Bristol. I must send this away immediately, lest Mr. Lorimer should be gone. My respects to those gentlemen, to whom I shall write, and to my other friends, by Mr. Ralph's vessel, which sails next week. I am your ever loving husband,

B. FRANKLIN.

P. S.—When you write to Boston, give my love to sister Jenny, as I have not often time to write to her. If you please, you may send her the enclosed little picture.

CLXX

TO MRS. DEBORAH FRANKLIN

LONDON, 19 February, 1758.

MY DEAR CHILD:—I have wrote you several long letters lately; the last was by Mr. Ralph, and at the same time I wrote to my dear Sally. Last night I re-

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ceived yours of the 1st and 6th of January, which gave me the great pleasure of hearing that you and my little family were well. I hope you continue so, and that I shall have the happiness to find you so. The letter you mention to have sent me by Captain Robinson is not come to hand; but that by Mr. Hunt I received and answered.

I regret the loss of my friend Parsons. Death begins to make breaches in the little junto of old friends that he had long forborne, and it must be expected he will now soon pick us all off one after another.

Your kind advice about getting a chariot, I had taken some time before; for I found that every time I walked out I got a fresh cold; and the hackney coaches at this end of the town, where most people keep their own, are the worst in the whole city, miserable, dirty, broken, shabby things, unfit to go into when dressed clean, and such as one would be ashamed to get out of at any gentleman's door. As to burning wood, it would answer no end, unless one would furnish all one's neighbours and the whole city with the same. The whole town is one great smoky house, and every street a chimney, the air full of floating seacoal soot, and you never get a sweet breath of what is pure, without riding some miles for it into the country.

I am sorry to hear that a storm has damaged a house of my good friend Mr. Bartram. Acquaint him that I have received the seeds, and shall write to him shortly. I hope the Speaker is recovered of the illness you mention.

Give my thanks to Dr. Bond for the care he takes

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of you. I have wrote to him by this vessel. Mr. Hunter and Polly talk of returning this spring. He is wonderfully recruited. They both desire to be remembered to you. She received your letter and answered it. Her answer I enclosed in one of mine to you. Her daughter Rachel, who plays on the harpsichord and sings prettily, sends Sally one of her songs that I fancied.

I send you by Captain Budden a large case and a small box. In the large case is another small box, containing some English china, viz.: melons and leaves for a desert of fruit and cream, or the like; a bowl remarkable for the neatness of the figures, made at Bow, near this city; some coffee cups of the same; a Worcester bowl, ordinary. To show the difference of workmanship, there is something from all the china works in England; and one old true china basin mended, of an odd color. The same box contains four silver salt ladles, newest, but ugliest, fashion; a little instrument to core apples; another to make little turnips out of great ones; six coarse diaper breakfast cloths; they are to spread on the tea table, for nobody breakfasts here on the naked table, but on the cloth they set a large tea board with the cups. There is also a little basket, a present from Mrs. Stevenson to Sally, and a pair of garters for you, which were knit by the young lady, her daughter, who favored me with a pair of the same kind, the only ones I have been able to wear, as they need not be bound tight, the ridges in them preventing their slipping. We send them therefore as a curiosity for the form, more than for the value. Goody Smith

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may, if she pleases, make such for me hereafter. My love to her.

In the great case, besides the little box, is contained some carpeting for a best room floor. There is enough for one large or two small ones; it is to be sewed together, the edges being first felled down, and care taken to make the figures meet exactly; there is bordering for the same. This was my fancy. Also two large fine Flanders bedticks, and two pair of large superfine blankets, two fine damask tablecloths and napkins, and forty-three ells of Ghentish sheeting Holland. These you ordered. There are also fifty-six yards of cotton, printed curiously from copper plates, a new invention, to make bed and window curtains; and seven yards of chair bottoms, printed in the same way, very neat. These were my fancy; but Mrs. Stevenson tells me I did wrong not to buy both of the same color. Also seven yards of printed cotton, blue ground, to make you a gown. I bought it by candlelight, and liked it then, but not so well afterwards. If you do not fancy it, send it as a present from me to sister Jenny. There is a better gown for you, of flowered tissue, sixteen yards, of Mrs. Stevenson's fancy, cost nine guineas; and I think it a great beauty. There was no more of the sort, or you should have had enough for a *negligée* or suit.

There are also snuffers, a snuffstand, and extinguisher, of steel, which I send for the beauty of the work. The extinguisher is for spermaceti candles only, and is of a new contrivance, to preserve the snuff upon the candle. There is some music Billy

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bought for his sister, and some pamphlets for the Speaker and for Susy Wright. A mahogany and a little shagreen box, with microscopes and other optical instruments loose, are for Mr. Alison, if he likes them; if not, put them in my room till I return. I send the invoice of them, and I wrote to him formerly the reason of my exceeding his orders. There are also two sets of books, a present from me to Sally, *The World* and *The Connoisseur*. My love to her.

I forgot to mention another of my fancyings, viz., a pair of silk blankets, very fine. They are of a new kind, were just taken in a French prize, and such were never seen in England before. They are called blankets, but I think they will be very neat to cover a summer bed, instead of a quilt or counterpane. I had no choice, so you will excuse the soil on some of the folds; your neighbour Foster can get it off. I also forgot, among the china, to mention a large fine jug for beer, to stand in the cooler. I fell in love with it at first sight; for I thought it looked like a fat jolly dame clean and tidy, with a neat blue and white calico gown on, good natured and lovely, and put me in mind of—somebody. It has the coffee cups in it, packed in best crystal salt, of a peculiar nice flavor, for the table, not to be powdered.

I hope Sally applies herself closely to her French and music, and that I shall find she has made great proficiency. The harpischord I was about, and which was to have cost me forty guineas, Mr. Stanley advises me not to buy; and we are looking out for another, one that has been some time in use, and is a

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tried good one, there being not so much dependence on a new one, though made by the best hands. Sally's last letter to her brother is the best wrote that of late I have seen of hers. I only wish she was a little more careful of her spelling. I hope she continues to love going to church, and would have her read over and over again *The Whole Duty of Man*, and *The Lady's Library*.

Look at the figures on the china bowl and coffee cups, with your spectacles on; they will bear examining.

I have made your compliments to Mrs. Stevenson. She is indeed very obliging, takes great care of my health, and is very diligent when I am any way indisposed; but yet I have a thousand times wished you with me, and my little Sally with her ready hands and feet to do, and go, and come, and get what I wanted. There is a great difference in sickness between being nursed with that tender attention which proceeds from sincere love, and ——[1]

CLXXI

TO THOMAS HUBBARD, AT BOSTON

LONDON, 28 April, 1758.

SIR:—In pursuance of Mr. Winthrop's memorandum, which I lately received from you, through the hands of Mr. Mico, I have procured and delivered to him the following things, viz.:

[1] The remainder of the letter is lost.

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A mahogany case lined with lead, containing thirty-five square glass bottles, in five rows, seven in a row.

A glass globe of the same size and kind with that I used at Philadelphia, and mounted in the same manner.

A large glass cylinder, mounted on an iron axis with brass caps; this form being most used here, and thought better than the globe, as a long narrow cushion will electrify a greater surface at the same time.

The bottles have necks, which I think better than to be quite open; for so they would either be exposed to the dust and damp of the air, if they had no stoppers, or the stoppers would be too near together to admit of electrifying a single bottle, or row of bottles; there is only a little more difficulty in lining the inside with tinfoil, but that is chiefly got over by cutting it into narrow strips, and guiding them in with a stick flat at one end, to apply the more conveniently to the pasted side of the glass. I would have coated them myself, if the time had not been too short. I send the tinfoil, which I got made of a proper breadth for the purpose; they should be coated nine inches high, which brings the coating just even with the edge of the case. The tinfoil is ten inches broad, which allows for lapping over the bottom.

I have bored the holes in all the stoppers for the communicating wires, provided all the wires, and fixed one or two to show the manner. Each wire, to go into a bottle, is bent so that the two ends go in

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and spring against the inside coating or lining. The middle of the wire goes up into the stopper, with an eye, through which the long communicating wires pass, that connect all the bottles in one row.

To form occasional communications with more rows, there must be, on the long wires of the second and fourth rows, four other movable wires, which I call cross-wires, about two inches and a half long, with a small ball of any metal about the size of a pistol-bullet at each end. The ball of one end is to have a hole through the middle, so that it may be slipped on the long wire; and one of these cross-wires is to be placed between the third and fourth bottles of the row at each end; and on each of the above-mentioned rows, that is, two to each row, they must be made to turn easy on the wires, so that when you would charge only the middle row, you turn two of them back on the first, and two on the fifth row, then the middle row will be unconnected with the others. When you would charge more rows, you turn them forwards or backwards, so as to have the communication completed with just the number of rows you want.

The brass handles of the case communicate with the outside of the bottles, when you wish to make the electrical circuit.

I see, now I have wrote it, that the greatest part of this letter would have been more properly addressed to Mr. Winthrop himself[1]; but probably

[1] At that time Professor of Mathematics and Natural Philosophy in Harvard University, for which institution the electrical apparatus described in this letter was designed.—S.

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you will send it to him with the things, and that will answer the end. Be pleased to tender my best respects to him and the rest of the gentlemen of the College.

I am, with great esteem and regard, Sir,

Your most obliged humble servant,

B. FRANKLIN.

P. S.—I beg the College will do me the favor to accept a Virgil, which I send in the case, thought to be the most curiously printed of any book hitherto done in the world.[1]

CLXXII

TO MRS. DEBORAH FRANKLIN

LONDON, 10 June, 1758.

MY DEAR CHILD:—I was down at Cambridge with Billy when Snead sailed, so I did not write again by him as I intended. His sailing so soon was unexpected to me. I am somewhat out of the way of vessels, and Mr. Partridge, by mistake, wrote me Snead was not to sail that week; so, being very kindly entertained there in the colleges, we did not hurry so soon home as we might have done. However, this vessel perhaps may be there about the same time.

I think nobody ever had more faithful correspon-

[1] A copy of Baskerville's quarto edition of Virgil, printed the year before at Birmingham, and perhaps the most beautiful of the various works by which this celebrated type-founder and printer gained the praise of "uniting, in a singularly happy manner, the elegance of Plantin with the clearness of the Elzevirs."—S.

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dents than I have in Mr. Hughes and you. It is impossible for me to get or keep out of your debts. I received the bill of exchange you got of Mr. Nelson, and it is paid. I received also the Proprietary's account. It gives me concern to receive such frequent accounts of your being indisposed; but we both of us grow in years, and must expect our constitutions, though tolerably good in themselves, will by degrees give way to the infirmities of age.

I have sent, in a trunk of the Library Company's, some of the best writing paper for letters, and best quills and wax, all for Mrs. Moore, which I beg she would accept; having received such civilities here from her sister and brother Scott as are not in my power to return. I shall send some to Sally by the next opportunity. By Captain Lutwidge I sent my dear girl a newest fashioned white hat and cloak, and sundry little things, which I hope will get safe to hand. I now send her a pair of buckles, made of French paste stones, which are next in lustre to diamonds. They cost three guineas, and are said to be cheap at that price. I fancy I see more likeness in her picture than I did at first, and I look at it often with pleasure, as at least it reminds me of her. Yours is at the painter's, who is to copy it and do me of the same size; but, as to family pieces, it is said they never look well, and are quite out of fashion, and I find the limner very unwilling to undertake any thing of the kind. However, when Franky's comes, and that of Sally by young Hesselius, I shall see what can be done. I wonder how you came by Ben Lay's picture.

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You are very prudent not to engage in party disputes. Women never should meddle with them, except in endeavours to reconcile their husbands, brothers, and friends, who happen to be of contrary sides. If your sex keep cool, you may be a means of cooling ours the sooner, and restoring more speedily that social harmony among fellow-citizens that is so desirable after long and bitter dissensions.

Cousin Dunlap [1] has wrote me an account of his purchasing Chattin's printing-house. I wish it may be advantageous to him without injuring Mr. Hall. I can however do nothing to encourage him, as a printer in Philadelphia, inconsistent with my pre-engagement to so faithful a partner. And I trust you will take care not to do any thing in that way that may draw reflections on me; as if I did underhand, through your means, what I would not care to appear in openly. I hope he will keep a good understanding with Mr. Hall, and I am pleased to hear that he asked his advice and friendship; but I have thought it right and necessary to forbid the use of my letters by Mr. Dunlap without Mr. Hall's consent. The post-office, if it is agreeable to you, may be removed to Mr. Dunlap's house, it being proposed by our good friend Mr. Hughes.

I wrote to you lately to speak to Ambruster [2] not to make use of my name any more in his newspaper, as I have no particular concern in it, but as one of

[1] William Dunlap, an Irish printer married to a relative of his wife.

[2] Anthony Ambruster, a German by birth, who printed German books in Philadelphia, and for some time published a newspaper there in the German language.

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the trustees only. I have no prospect of returning until next spring, so you will not expect me. But pray remember to make me as happy as you can, by sending some pippins for myself and friends, some of your small hams, and some cranberries.

Billy is of the Middle Temple, and will be called to the bar either this term or the next. I write this in answer to your particular inquiry. I am glad you like the cloak I sent you. The black silk was sent by our friend Mr. Collinson. I never saw it. Your answer to Mr. Strahan was just what it should be. I was much pleased with it. He fancied his rhetoric and art would certainly bring you over.

I have ordered two large print Common Prayer Books to be bound, on purpose for you and Goody Smith; and, that the largeness of the print may not make them too bulky, the christenings, matrimonies, and every thing else that you and she have not immediate and constant occasion for, are to be omitted. So you will both of you be reprieved from the use of spectacles in church a little longer.

If the ringing of the bells frightens you, tie a piece of wire from one bell to the other, and that will conduct the lightning without ringing or snapping, but silently; though I think it best the bells should be at liberty to ring, that you may know when they are electrified; and when you are afraid you may keep at a distance.[1] I wrote last winter to Josey Crocker

[1] In the year 1753, he had erected an iron rod for the purpose of drawing lightning from the clouds into his house. He also placed two bells in such position that they would ring when the rod was electrified. See description of this contrivance in vol. ii., in a letter to Peter Collinson, dated September, 1753.

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to come over hither and stay a year, and work in some of the best shops for improvement in his business, and therefore did not send the tools; but if he is about to be married I would not advise him to come. I shall send the tools immediately. You have disposed of the apple-trees very properly. I condole with you on the loss of your walnuts.

I see the governor's treatment of his wife makes all the ladies angry. If it is on account of the bad example, that will soon be removed; for the Proprietors are privately looking out for another; being determined to discard him, and the place goes a begging. One, to whom it was offered, sent a friend to make some inquiries of me. The Proprietors told him they had there a city-house and a country-house, which he might use rent free; that every thing was so cheap he might live on five hundred pounds sterling a year, keep a genteel table, a coach, &c., and his income would be at least nine hundred pounds. If it fell short of that, the Proprietors would engage to make it up. For the truth of his being able to live genteelly and keep a coach for five hundred pounds a year, the Proprietors referred him to Mr. Hamilton, who, it seems, told him the same story; but, on inquiry of Mr. Morris, he had quite a different account, and knew not which to believe. The gentleman is one Mr. Graves, a lawyer of the Temple. He hesitated a good while, and I am now told has declined accepting it. I wish that may not be true, for he has the character of being a very good sort of man; though while the instructions continue, it matters little who is our

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governor. It was to have been kept a secret from me, that the Proprietors were looking out for a new one; because they would not have Mr. Denny know any thing about it, till the appointment was actually made, and the gentleman ready to embark. So you may make a secret of it too, if you please, and oblige all your friends with it.[1]

[1] The Proprietors were dissatisfied with Governor Denny, and resolved to remove him. The negotiation with Mr. Graves having failed, the post was next offered to James Hamilton, a native of Philadelphia, who had been governor a few years before, and who was at this time in London. He took an independent ground with the Proprietors, and seems to have had some difficulty in arranging certain points to their mutual satisfaction, especially in what related to the long-disputed question as to taxing the proprietary estates. This is evident from the following extract from a letter, which he wrote in London to Thomas Penn, one of the Proprietors, August 21, 1759, while the negotiation was pending:

"I am sorry," said he, "that this treaty about the government has been drawn out to so inconvenient a length. Everybody knows I did not solicit my appointment to it; nor have I varied the terms, on which I professed to engage in it, one iota from the beginning. Those terms were, *that I would not be restrained from giving my assent to any reasonable bill for taxing the proprietary estates in common with all the other estates in the province*, because in my opinion it was not more than just that it should be so. If you have changed your sentiments with regard to this matter, which for a long time I looked upon to be the the same as mine, it will give me no pain on my own account. Every thing that respects me may drop silently, as if it had never been moved. Only, for saving your time and my own, I think it incumbent on me to declare, as I have frequently done, that I cannot think of engaging myself in that service, but upon the terms or conditions above mentioned."

Mr. Hamilton was appointed governor, and he returned soon afterwards to Pennsylvania. The reluctance of the Proprietors to have their lands taxed by the Assembly was not easily overcome, as clearly appears from their instructions to the governor on this head. They express a willingness to aid in the defence of the province by suitable contributions, but claim the privilege of doing it in such manner as their judgment shall dictate, and deny all right in the Assembly to impose a tax on their property in the province for any object whatever. "Wherefore," they add, "we recommend to you to use the most

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I need not tell you to assist godmother in her difficulties; for I know you will think it as agreeable to me as it is to your own good disposition. I could not find the bit of thread you mention to have sent me, of your own spinning. Perhaps it was too fine to be seen. I am glad little Franky begins to talk. It will divert you to have him often with you.

I think I have now gone through your letters, which always give me great pleasure to receive and read, since I cannot be with you in person. Distribute my compliments, respects, and love among my

prudent means in your power, *to avoid and prevent the Assembly from including any part of our estate in the said province in any tax to be by them raised.* But, in case the exigency of the times, the King's immediate service, and the defence of the province cannot be provided for, unless our estate shall be included in any bill for raising taxes for such services; then we do, notwithstanding our general dislike of the same, permit you to give your assent to such a bill, as shall impose a tax *on our rents and quitrents only*, but not on our vacant lands, whether appropriated or not, nor on any fines or purchase money pretended or supposed to be due to us, which, we are well advised, are not in their nature liable to taxation; always provided, as our rents and quitrents are clear and certain in their amount, that proper and reasonable clauses be inserted in every such bill, for rendering as clear and as certain as possible the true value of all other persons' estates, that we may not be taxed beyond our true proportion with respect to others. And provided also, that *our respective tenants be obliged to pay the same*, and to deduct the same out of our rents, when they account to us or our receiver, and not to pretend to authorize the sale of any of our lands for non-payment of taxes."

Clogged with such instructions, although the point of taxation was yielded to a certain extent, Mr. Hamilton could hardly hope to satisfy the Assembly or the people, who believed and contended, that, for all the purposes of defence, the property of the Proprietors in the province, of whatever kind or however situated, was justly liable to be taxed in the same proportion, and the same manner, as their own; nor indeed do the instructions seem to accord fully with Mr. Hamilton's view of the subject, as expressed in his letter to Mr. Penn.—SPARKS.

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friends, and believe me ever, my dear Debby, your affectionate husband,

B. FRANKLIN.

P. S.—Mrs. Stevenson and her daughter desire me to present their compliments and offer their services to you and Sally. I think of going into the country soon, and shall be pretty much out this summer, in different parts of England. I depend chiefly on these journeys for the establishment of my health.

CLXXIII

TO THE SPEAKER AND COMMITTEE OF THE PENNSYLVANIA ASSEMBLY

LONDON, 10 June, 1758.

GENTLEMEN:—In mine of May 13th I gave you a particular account of the hearing before the Attorney and Solicitor General, on a reference of Smith's petition. They have not yet made their report, and would now, I hear, excuse themselves from doing it as unnecessary, since they have heard that the prisoners are discharged. But they are still solicited by Mr. Penn and Mr. Moore to report, on an allegation that they have letters advising that warrants are issued for taking them up again. None of my letters from Pennsylvania mentions any thing of this. I have ventured to say I doubt the truth of it. Whether they will report or not is uncertain; but if they should report against us, I am determined to dispute the matter again before the Council.

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I send you herewith a copy of the note I furnished our solicitor with, when drawing his brief; a copy of the brief itself; a copy of some remarks on the reflection thrown upon the Assembly by the Council at the first hearing, as being Quakers and therefore against defence, and as bearing malice against Smith because a clergyman of the Church of England, and against Moore because he petitioned for defence. These I gave to our counsel before the second hearing, when they were to speak, and they made good use of them. I furnished also a number of cases from the votes of Assemblies in the other colonies, showing that they all claimed and exercised power of committing for breach of privilege; but of this paper of cases I have no copy by me.[1]

Mr. Charles at my request has drawn the state of the case, in order to obtain opinions of eminent lawyers how far our present privileges would be affected in case of a change of government, by our coming

[1] Petitions had been sent to the Assembly, charging William Moore, president of the Court of Common Pleas in Chester County, with misconduct in his office. Moore was summoned to appear before the House, which he refused to do. The House found him guilty, however, and requested the governor to remove him from office. This was declined by the governor, till he should investigate the case; and in the meantime Moore published a defence containing language which the Assembly voted to be slanderous and insulting. It appeared in evidence also, that William Smith, provost of the College, had been concerned in revising and correcting this piece before it was published. Smith was then arrested, and both he and Moore were imprisoned. The public was much agitated by the controversy. The governor took the part of the accused. Smith and Moore ultimately appealed to the King in Council, where it was decided that the Assembly had transcended their powers, and that their conduct was reprehensible. A summary of the case is contained in Gordon's *History of Pennsylvania*, p. 352.—Editor.

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immediately under the crown. I send you a copy of this case, with the opinion of our counsel upon it, who is esteemed the best acquainted with our American affairs and constitutions, as well as with government law in general. He being also thoroughly knowing in the present views of the Board of Trade, and in their connexions and characters, has given me withal, as a friend, some prudential advice in a separate sheet distinct from his law opinion, because the law opinion might necessarily appear where he would not care the advice should be seen. I send you, also, a copy of this, and should be glad of your sentiments upon it. One thing that he recommends to be done before we push our point in Parliament, is *removing the prejudices that art and accident have spread among the people of this country against us, and obtaining for us the good opinion of the bulk of mankind without doors*. This I hope we have it in our power to do, by means of a work now nearly ready for the press, calculated to engage the attention of many readers, and at the same time to efface the bad impressions received of us; but it is thought best not to publish it till a little before the next session of Parliament.[1]

The Proprietors are determined to discard their present governor, as soon as they can find a successor to their mind. They have lately offered the government to one Mr. Graves, a gentleman of the

[1] The work here alluded to is undoubtedly the *Historical Review of the Constitution and Government of Pennsylvania*, which was first published in the year 1759. See letter to David Hume, under date of September 27, 1760.

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Temple, who has had it for some time under consideration, and makes a difficulty of accepting it. The beginning of the week it was thought he would accept; but on Thursday night I was told he had resolved to refuse it. I know not, however, whether he may not yet be prevailed on. He has the character of a man of good understanding and good dispositions,—[*incomplete*].

CLXXIV

TO JOHN LINING, AT CHARLESTON

LONDON, 17 June, 1758.

DEAR SIR:—In a former letter I mentioned the experiment for cooling bodies by evaporation, and that I had, by repeatedly wetting the thermometer with common spirits, brought the mercury down five or six degrees. Being lately at Cambridge, and mentioning this in conversation with Dr. Hadley, professor of chemistry there, he proposed repeating the experiments with ether, instead of common spirits as the ether is much quicker in evaporation. We accordingly went to his chamber, where he had both ether and a thermometer. By dipping first the ball of the thermometer into the ether, it appeared that the ether was precisely of the same temperament with the thermometer, which stood then at 65; for it made no alteration in the height of the little column of mercury. But when the thermometer was taken out of the ether, and the ether, with which the

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ball was wet, began to evaporate, the mercury sunk several degrees. The wetting was then repeated by a feather that had been dipped into the ether, when the mercury sunk still lower.

We continued this operation, one of us wetting the ball, and another of the company blowing on it with the bellows to quicken the evaporation, the mercury sinking all the time, till it came down to 7, which is 25 degrees below the freezing point, when we left off. Soon after it passed the freezing point a thin coat of ice began to cover the ball. Whether this was water collected and condensed by the coldness of the ball from the moisture in the air or from our breath; or whether the feather, when dipped into the ether, might not sometimes go through it and bring up some of the water that was under it, I am not certain; perhaps all might contribute. The ice continued increasing till we ended the experiment, when it appeared near a quarter of an inch thick all over the ball, with a number of small *spicula*, pointing outwards. From this experiment one may see the possibility of freezing a man to death on a warm summer's day, if he were to stand in a passage through which the wind blew briskly, and to be wet frequently with ether, a spirit that is more inflammable than brandy or common spirits of wine.

It is but within these few years that the European philosophers seem to have known this power in nature, of cooling bodies by evaporation. But in the east they have long been acquainted with it. A friend tells me there is a passage in Bernier's *Travels through Indostan*, written near one hundred years

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ago, that mentions it as a practice (in travelling over dry deserts in that hot climate) to carry water in flasks wrapped in wet woollen cloths, and hung on the shady side of the camel, or carriage, but in the free air; whereby, as the cloths gradually grow drier, the water contained in the flasks is made cool. They have likewise a kind of earthen pots, unglazed, which let the water gradually and slowly ooze through their pores, so as to keep the outside a little wet, notwithstanding the continual evaporation, which gives great coldness to the vessel and the water contained in it. Even our common sailors seem to have had some notion of this property; for I remember that, being at sea when I was a youth, I observed one of the sailors, during a calm in the night, often wetting his finger in his mouth, and then holding it up in the air, to discover, as he said, if the air had any motion, and from which side it came; and this he expected to do by finding one side of his finger grow suddenly cold, and from that side he should look for the next wind; which I then laughed at as a fancy.

May not several phenomena hitherto unconsidered or unaccounted for be explained by this property? During the hot Sunday at Philadelphia, in June, 1750, when the thermometer was up at 100 in the shade, I sat in my chamber without exercise, only reading or writing, with no other clothes on than a shirt and a pair of long linen drawers, the windows all open, and a brisk wind blowing through the house; the sweat ran off the backs of my hands, and my shirt was often so wet as to induce me to call for

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dry ones to put on. In this situation, one might have suspected that the natural heat of the body, 96, added to the heat of the air, 100, should jointly have created or produced a much greater degree of heat in the body; but the fact was that my body never grew so hot as the air that surrounded it, or the inanimate bodies immersed in the same air. For I remember well that the desk, when I laid my arm upon it; a chair, when I sat down in it; and a dry shirt out of the drawer, when I put it on—all felt exceeding warm to me, as if they had been warmed before a fire. And I suppose a dead body would have acquired the temperature of the air, though a living one, by continual sweating, and by the evaporation of that sweat, was kept cold.

May not this be a reason why our reapers in Pennsylvania, working in the open field in the clear hot sunshine common in our harvest-time,[1] find themselves well able to go through that labor without being much incommoded by the heat, while they continue to sweat, and while they supply matter for keeping up that sweat, by drinking frequently of a thin evaporable liquor, water mixed with rum; but, if the sweat stops, they drop, and sometimes die suddenly, if a sweating is not again brought on by drinking that liquor, or, as some rather choose in that case, a kind of hot punch, made with water, mixed with honey, and a considerable proportion of vinegar?

[1] Pennsylvania is in about lat. 40, and the sun, of course, about 12 degrees higher, and therefore much hotter, than in England. Their harvest is about the end of June or beginning of July, when the sun is nearly at the highest.—F.

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May there not be in negroes a quicker evaporation of the perspirable matter from their skins and lungs, which, by cooling them more, enables them to bear the sun's heat better than whites do? (if that is a fact, as it is said to be; for the alleged necessity of having negroes rather than whites to work in the West India fields is founded upon it,) though the color of their skins would otherwise make them more sensible of the sun's heat, since black cloth heats much sooner and more, in the sun, than white cloth. I am persuaded, from several instances happening within my knowledge, that they do not bear cold weather so well as the whites; they will perish when exposed to a less degree of it, and are more apt to have their limbs frost-bitten; and may not this be from the same cause?

Would not the earth grow much hotter under the summer sun if a constant evaporation from its surface, greater as the sun shines stronger, did not, by tending to cool it, balance, in some degree, the warmer effects of the sun's rays? Is it not owing to the constant evaporation from the surface of every leaf, that trees, though shone on by the sun, are always, even the leaves themselves, cool to our sense? at least much cooler than they would otherwise be? May it not be owing to this that, fanning ourselves when warm, does really cool us, though the air is itself warm that we drive with the fan upon our faces? For the atmosphere round and next to our bodies, having imbibed as much of the perspired vapor as it can well contain, receives no more, and the evaporation is therefore checked and retarded

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till we drive away that atmosphere, and bring drier air in its place, that will receive the vapor, and thereby facilitate and increase the evaporation. Certain it is that mere blowing of air on a dry body does not cool it, as any one may satisfy himself by blowing with a bellows on the dry ball of a thermometer; the mercury will not fall; if it moves at all, it rather rises, as being warmed by the friction of the air on its surface.

To these queries of imagination I will only add one practical observation,—that wherever it is thought proper to give ease in cases of painful inflammation in the flesh (as from burnings or the like) by cooling the part, linen cloths wet with spirit and applied to the part inflamed, will produce the coolness required, better than if wet with water, and will continue it longer. For water, though cold when first applied, will soon acquire warmth from the flesh, as it does not evaporate fast enough; but the cloths wet with spirit will continue cold as long as any spirit is left to keep up the evaporation, the parts warmed escaping as soon as they are warmed, and carrying off the heat with them. I am, Sir, &c.,

B. FRANKLIN.

CLXXV

TO MRS. DEBORAH FRANKLIN

LONDON, 6 September, 1758.

MY DEAR CHILD:—In mine of June 10th, by the *Mercury*, Captain Robinson, I mentioned our having

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been at Cambridge. We stayed there a week, being entertained with great kindness by the principal people, and shown all the curiosities of the place; and returning by another road to see more of the country, we came again to London. I found the journey advantageous to my health, increasing both my health and spirits, and therefore, as all the great folks were out of town, and public business at a stand, I the more easily prevailed with myself to take another journey, and accept of the invitation we had, to be again at Cambridge at the Commencement, the beginning of July. We went accordingly, were present at all the ceremonies, dined every day in their halls, and my vanity was not a little gratified by the particular regard shown me by the chancellor and vice-chancellor of the University and the heads of colleges.

After the Commencement we went from Cambridge through Huntingdonshire into Northumberlandshire, and at Wellingborough, on inquiry, we found still living Mary Fisher, whose maiden name was Franklin, daughter and only child of Thomas Franklin, my father's eldest brother. She is five years older than sister Dowse, and remembers her going away with my father and his then wife and two other children to New England, about the year 1685. We have had no correspondence with her since my uncle Benjamin's death, now near thirty years. I knew she had lived at Wellingborough, and had married there to one Mr. Richard Fisher, a grazier and tanner, about fifty years ago, but did not expect to see either of them alive, so inquired for

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their posterity. I was directed to their house, and we found them both alive, but weak with age, very glad however to see us. She seems to have been a very smart, sensible woman. They are wealthy, have left off business, and live comfortably. They have had only one child, a daughter, who died when about thirty years of age, unmarried. She gave me several of my uncle Benjamin's letters to her, and acquainted me where the other remains of the family lived, of which I have, since my return to London, found out a daughter of my father's only sister, very old, and never married. She is a good, clever woman, but poor, though vastly contented with her situation, and very cheerful. The others are in different parts of the country. I intend to visit them, but they were too much out of our tour in that journey.

From Wellingborough we went to Ecton, about three or four miles, being the village where my father was born, and where his father, grandfather, and great-grandfather had lived, and how many of the family before them we know not. We went first to see the old house and grounds; they came to Mr. Fisher with his wife, and after letting them for some years, finding his rent something ill paid, he sold them. The land is now added to another farm, and a school kept in the house. It is a decayed old stone building, but still known by the name of Franklin House. Thence we went to visit the rector of the parish, who lives close by the church, a very ancient building. He entertained us very kindly, and showed us the old church register, in which were the births, marriages, and burials of our ancestors

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for two hundred years, as early as his book began, His wife, a good-natured, chatty old lady (granddaughter of the famous Archdeacon Palmer, who formerly had that parish, and lived there), remembered a great deal about the family; carried us out into the churchyard, and showed us several of their gravestones, which were so covered with moss that we could not read the letters, till she ordered a hard brush and basin of water, with which Peter scoured them clean, and then Billy copied them. She entertained and diverted us highly with stories of Thomas Franklin, Mrs. Fisher's father, who was a conveyancer, something of a lawyer, clerk of the county courts, and clerk to the Archdeacon in his visitations; a very leading man in all county affairs, and much employed in public business. He set on foot a subscription for erecting chimes in their steeple, and completed it, and we heard them play. He found out an easy method of saving their village meadows from being drowned, as they used to be sometimes by the river, which method is still in being; but, when first proposed, nobody could conceive how it could be; "but, however," they said, "if Franklin says he knows how to do it, it will be done." His advice and opinion were sought for on all occasions by all sorts of people, and he was looked upon, she said, by some as something of a conjurer. He died just four years before I was born, on the same day of the same month.

Since our return to London, I have had a kind letter from cousin Fisher, and another from the rector, which I send you.

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From Ecton we went to Northampton, where we stayed part of the day; then went to Coventry, and from thence to Birmingham. Here, upon inquiry, we soon found out yours, and cousin Wilkinson's, and cousin Cash's relations. First, we found out one of the Cashes, and he went with us to Rebecca Flint's, where we saw her and her husband. She is a turner and he a buttonmaker; they have no children; were very glad to see any person that knew their sister Wilkinson; told us what letters they had received, and showed us some of them; and even showed us that they had, out of respect, preserved a keg, in which they had received a present of some sturgeon. They sent for their brother, Joshua North, who came with his wife immediately to see us; he is a turner also, and has six children; a lively, active man. Mrs. Flint desired me to tell her sister, that they live still in the old house she left them in, which I think she says was their father's. From thence Mr. North went with us to your cousin Benjamin's.[1]

CLXXVI

TO HUGH ROBERTS

LONDON, 16 September, 1758.

DEAR FRIEND:—Your kind letter of June 1st gave me great pleasure. I thank you for the concern you express about my health, which at present seems tolerably confirmed by my late journey into different

[1] The remainder of the letter is missing.

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parts of the kingdom, and have been highly entertaining as well as useful to me. Your visits to my little family in my absence are very obliging, and I hope you will be so good as to continue them. Your remark on the thistle and the Scotch motto made us very merry, as well as your string of puns. You will allow me to claim a little merit or demerit in the last, as having had some hand in making you a punster; but the wit of the first is keen, and all your own.

Two of the former members of the Junto, you tell me, are departed this life, Potts and Parsons. Odd characters both of them. Parsons a wise man, that often acted foolishly; Potts a wit, that seldom acted wisely. If *enough* were the means to make a man happy, one had always the *means* of happiness, without ever enjoying the *thing;* the other had always the *thing*, without ever possessing the *means*. Parsons, even in his prosperity, always fretting; Potts, in the midst of his poverty, ever laughing. It seems, then, that happiness in this life rather depends on internals than externals; and that, besides the natural effects of wisdom and virtue, vice and folly, there is such a thing as a happy or an unhappy constitution. They were both our friends, and loved us. So, peace to their shades. They had their virtues as well as their foibles; they were both honest men, and that alone, as the world goes, is one of the greatest of characters. They were old acquaintances, in whose company I formerly enjoyed a great deal of pleasure and I cannot think of losing them without concern and regret.

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I shall, as you suppose, look on every opportunity you give me of doing you service, as a favor, because it will afford me pleasure. I know how to make you ample returns for such favors, by giving you the pleasure of building me a house. You may do it without losing any of your own time; it will only take some part of that you now spend in other folks' business. It is only jumping out of their waters into mine.

I am grieved for our friend Syng's loss. You and I, who esteem him, and have valuable sons ourselves, can sympathize with him sincerely. I hope yours is perfectly recovered, for your sake as well as for his own. I wish he may be, in every respect, as good and as useful as his father. I need not wish him more; and can only add that I am, with great esteem, dear friend, yours affectionately,

B. FRANKLIN.

P. S.—I rejoice to hear of the prosperity of the Hospital, and send the wafers. I do not quite like your absenting yourself from that good old club, the Junto. Your more frequent presence might be a means of keeping them from being all engaged in measures not the best for the public welfare. I exhort you, therefore, to return to your duty; and, as the Indians say, to confirm my words, I send you a Birmingham tile. I thought the neatness of the figures would please you.

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CLXXVII

TO MRS. JANE MECOM

LONDON, 16 September, 1758.

DEAR SISTER:—I received your favor of June 17th. I wonder you have had no letter from me since my being in England. I have wrote you at least two, and I think a third before this, and, what was next to waiting on you in person, sent you my picture. In June last I sent Benny a trunk of books, and wrote to him. I hope they are come to hand, and that he meets with encouragement in his business, I congratulate you on the conquest of Cape Breton, and hope, as your people took it by praying the first time, you will now pray that it may never be given up again, which you then forgot. Billy is well, but in the country. I left him at Tunbridge Wells where we spent a fortnight, and he is now gone with some company to see Portsmouth. We have been together over a great part of England this summer, and, among other places, visited the town our father was born in, and found some relations in that part of the country still living.

Our cousin Jane Franklin, daughter of our uncle John, died about a year ago. We saw her husband, Robert Page, who gave us some old letters to his wife from uncle Benjamin. In one of them, dated Boston, July 4, 1723, he writes that your uncle Josiah has a daughter Jane, about twelve years old, a good-humored child. So keep up to your character, and don't be angry when you have no letters. In a little book he sent her, called *None but Christ*,

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he wrote an acrostic on her name, which for namesake's sake, as well as the good advice it contains, I transcribe and send you, viz.:

Illuminated from on high,
And shining brightly in your sphere,
Ne'er faint, but keep a steady eye,
Expecting endless pleasures there.

Flee vice as you'd a serpent flee;
Raise *faith* and *hope* three stories higher,
And let Christ's endless love to thee
Ne'er cease to make thy love aspire.

Kindness of heart by words express,
Let your obedience be sincere,
In prayer and praise your God address,
Nor cease, till he can cease to hear.

After professing truly that I had a great esteem and veneration for the pious author, permit me a little to play the commentator and critic on these lines. The meaning of *three stories higher* seems somewhat obscure. You are to understand, then, that *faith*, *hope*, and *charity* have been called the three steps of Jacob's ladder, reaching from earth to heaven; our author calls them *stories*, likening religion to a building, and these are the three stories of the Christian edifice. Thus improvement in religion is called *building up* and *edification*. *Faith* is, then, the ground floor; *hope* is up one pair of stairs. My dear beloved Jenny, don't delight so much to dwell, in those lower rooms, but get as fast as you can into the garret, for in truth the best room in the house is *charity*. For my part, I wish the house was turned

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upside down; it is so difficult (when one is fat) to go up stairs; and not only so, but I imagine *hope* and *faith* may be more firmly built upon *charity*, than *charity* upon *faith* and *hope*. However that may be, I think it the better reading to say—

Raise faith and hope one story higher.

Correct it boldly, and I'll support the alteration; for, when you are up two stories already, if you raise your building three stories higher you will make five in all, which is two more than there should be, you expose your upper rooms more to the winds and storms; and, besides, I am afraid the foundation will hardly bear them, unless indeed you build with such light stuff as straw and stubble, and that, you know, won't stand fire. Again, where the author says—

Kindness of heart by words express,

strike out *words*, and put in *deeds*. The world is too full of compliments already. They are the rank growth of every soil, and choke the good plants of benevolence and beneficence; nor do I pretend to be the first in this comparison of words and actions to plants; you may remember an ancient poet, whose works we have all studied and copied at school long ago:

A man of words and not of deeds
Is like a garden full of weeds.

It is a pity that good works, among some sorts of people, are so little valued, and good words admired in their stead; I mean seemingly pious discourses,

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instead of humane, benevolent actions. Those they almost put out of countenance, by calling morality *rotten morality*, righteousness *ragged righteousness*, and even filthy rags. So much by way of commentary.

My wife will let you see my letter, containing an account of our travels, which I would have you read to sister Dowse, and give my love to her. I have no thoughts of returning till next year, and then may possibly have the pleasure of seeing you and yours; taking Boston in my way home. My love to brother and all your children, concludes at this time from, dear Jenny, your affectionate brother,

B. FRANKLIN.

CLXXVIII

TO MISS MARY STEVENSON

CRAVEN STREET, 4 May, 1759.

MY DEAR CHILD:—Hearing that you were in the Park last Sunday, I hoped for the pleasure of seeing you yesterday at the oratorio in the Foundling Hospital; but, though I looked with all the eyes I had, not excepting even those I carry in my pocket, I could not find you; and this morning your good mamma has received a line from you, by which we learn that you are returned to Wanstead.

It is long since you heard from me, though not a day passes in which I do not think of you with the same affectionate regard and esteem I ever had for you. My not writing is partly owing to an inexcusable

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indolence, which I find grows upon me as I grow in years, and partly to an expectation I have had, from week to week, of making a little journey into Essex, in which I intended to call at Wanstead, and promised to myself the pleasure of seeing you there. I have now fixed this day se'nnight for that journey, and propose to take Mrs. Stevenson out with me, leave her with you till the next day, and call for her on Saturday in my return. Let me know by a line if you think any thing may make such a visit from us at that time improper or inconvenient. Present my sincerest respects to Mrs. Tickell, and believe me ever, dear Polly, your truly affectionate friend and humble servant,

B. FRANKLIN.

P. S.—We have company that dine with us to-day, and your careful mamma, being busied about many things, cannot write. Will did not see you in the Park. Mr. Hunter and his sister are both gone. God prosper their voyage. My compliments to Miss Pitt.

CLXXIX

TO LORD KAMES [1]

LONDON, 3 January, 1760.

MY DEAR LORD:—You have been pleased kindly to desire to have all my publications. I had daily

[1] Henry Home, better known by his title of Lord Kames, which he assumed, according to the custom of Scotland, on being appointed in 1752 a judge of the Court of Session. He was born in Berwick County in 1696, and was educated to the profession of the law, in which he

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expectations of procuring some of them from a friend to whom I formerly sent them when I was in America, and postponed writing to you, till I should obtain them; but at length he tells me he cannot find them; very mortifying this to an author, that his works should so soon be lost! So I can only send you my *Observations on the Peopling of Countries*, which happens to have been reprinted here; *The Description of the Pennsylvania Fire-place*, a machine of my contriving; and some little sketches that have been printed in the *Grand Magazine*, which I should hardly own, did I not know that your friendly partiality would make them seem at least tolerable.

How unfortunate I was, that I did not press you and Lady Kames more strongly to favor us with your company farther. How much more agreeable would our journey have been, if we could have enjoyed you as far as York. We could have beguiled the way, by discoursing on a thousand things, that now we may never have an opportunity of considering together; for conversation warms the mind,

became distinguished as an advocate and a judge. But his greatest eminence was derived from his literary productions, which were numerous, and some of them celebrated, particularly his *Elements of Criticism*, published in 1762; his *Sketches of the History of Man*, in 1773; and a small work published in 1761, entitled *An Introduction to the Art of Thinking*, which was originally compiled for the use of his own children. It is in two parts, the first a series of moral maxims, the second illustrations by little apologues, invented for the purpose; and anecdotes of different kinds, many of them, however, but little adapted to the end. Dr. Franklin, in a visit to Scotland in 1759, with his son William, passed some time with Lord Kames, and a friendship grew out of their intimacy which lasted during their lives. Lord Kames died December 27, 1782, in the eighty-seventh year of his age.—W. T. F.

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enlivens the imagination, and is continually starting fresh game, that is immediately pursued and taken, and which would never have occurred in the duller intercourse of epistolary correspondence. So that whenever I reflect on the great pleasure and advantage I received from the free communication of sentiment, in the conversation we had at Kames, and in the agreeable little rides to the Tweed side, I shall for ever regret our premature parting.

No one can more sincerely rejoice than I do on the reduction of Canada; and this is not merely as I am a colonist, but as I am a Briton. I have long been of opinion, that the *foundations of the future grandeur and stability of the British empire lie in America;* and though, like other foundations, they are low and little now, they are, nevertheless, broad and strong enough to support the greatest political structure that human wisdom ever yet erected. I am, therefore, by no means for restoring Canada. If we keep it, all the country from the St. Lawrence to the Mississippi will in another century be filled with British people. Britain itself will become vastly more populous, by the immense increase of its commerce; the Atlantic sea will be covered with your trading ships; and your naval power, thence continually increasing, will extend your influence round the whole globe, and awe the world! If the French remain in Canada, they will continually harass our colonies by the Indians, and impede if not prevent their growth; your progress to greatness will at best be slow, and give room for many accidents that may for ever prevent it. But I refrain, for I see you

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begin to think my notions extravagant, and look upon them as the ravings of a mad prophet.

Your Lordship's kind offer of Penn's picture is extremely obliging. But, were it certainly his picture, it would be too valuable a curiosity for me to think of accepting it. I should only desire the favor of leave to take a copy of it. I could wish to know the history of the picture before it came into your hands, and the grounds for supposing it his. I have at present some doubts about it; first, because the primitive Quakers declared against pictures as a vain expense; a man's suffering his portrait to be taken was conceived as pride; and I think to this day it is very little practised among them. Then, it is on a board; and I imagine the practice of painting portraits on boards did not come down so low as Penn's time; but of this I am not certain. My other reason is an anecdote I have heard, viz., that when old Lord Cobham was adorning his gardens at Stow with busts of famous men, he made inquiry of the family for the picture of William Penn, in order to get a bust formed from it, but could find none; that Sylvanus Bevan, an old Quaker apothecary, remarkable for the notice he takes of countenances, and a knack he has of cutting in ivory strong likenesses of persons he has once seen, hearing of Lord Cobham's desire, set himself to recollect Penn's face, with which he had been well acquainted; and cut a little bust of him in ivory, which he sent to Lord Cobham, without any letter or notice that it was Penn's. But my Lord, who had personally known Penn, on seeing it, immediately cried out, "Whence comes this? It

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is William Penn himself!" And from this little bust, they say, the large one in the gardens was formed.

I doubt, too, whether the whisker was not quite out of use at the time when Penn must have been of an age appearing in the face of that picture. And yet, notwithstanding these reasons, I am not without some hope that it may be his; because I know some eminent Quakers have had their pictures privately drawn and deposited with trusty friends; and know, also, that there is extant in Philadelphia a very good picture of Mrs. Penn, his last wife. After all, I own I have a strong desire to be satisfied concerning this picture; and as Bevan is yet living here, and some other old Quakers that remember William Penn, who died but 1718, I would wish to have it sent to me carefully packed up in a box by the wagon, (for I would not trust it by sea), that I may obtain their opinion. The charges I shall very cheerfully pay; and if it proves to be Penn's picture, I shall be greatly obliged to your Lordship for leave to take a copy of it, and will carefully return the original.[1]

My son joins with me in the most respectful compliments to you and Lady Kames. Our conversation, till we came to York, was chiefly a recollection of what we had seen and heard, the pleasures we had enjoyed, and the kindnesses we had received, in Scotland, and how far that country had exceeded our expectations. On the whole, I must say, I think the time we spent there was six weeks of the *densest* happiness I have met with in any part of my life;

[1] Time has vindicated Franklin's doubts about this picture.—Ed.

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and the agreeable and instructive society we found there in such plenty has left so pleasing an impression on my memory, that, did not strong connexions draw me elsewhere, I believe Scotland would be the country I should choose to spend the remainder of my days in. I have the honor to be, with the sincerest esteem and affection, my dear Lord, &c.,

B. FRANKLIN.

CLXXX

TO JOHN HUGHES

LONDON, 7 January, 1760.

DEAR SIR:—On my return from our northern journey I found several of your obliging favors, for which please to accept my hearty thanks. There has been for some time a talk of peace, and probably we should have had one this winter, if the King of Prussia's late misfortunes had not given the enemy fresh spirits, and encouraged them to try their luck another campaign, and exert all their remaining strength, in hopes of treating with Hanover in their hands. If this should be the case, possibly most of our advantages may be given up again at the treaty, and some among our great men begin already to prepare the minds of people for this, by discoursing that to keep Canada would draw on us the envy of other powers, and occasion a confederation against us; that the country is too large for us to people; not worth possessing, and the like. These notions I am every day and every hour combating, and I think

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not without some success. The event God only knows. The argument that seems to have the principal weight is, that, in case of another war, if we keep possession of Canada, the nation will save two or three millions a year, now spent in defending the American colonies, and be so much the stronger in Europe, by the addition of the troops now employed on that side of the water. To this I add, that the colonies would thrive and increase in a much greater degree, and that a vast additional demand would arise for British manufactures to supply so great an extent of Indian territory, with many other topics, which I urge occasionally, according to the company I happen into, or the persons I address. And, on the whole, I flatter myself that my being here at this time may be of some service to the general interest of America.

The acts of last year have all come to hand, but not all in a condition to be laid before the King for his approbation, as the governor's proposed amendments are tacked to them, and no distinction as to which were agreed to, or whether any or none; so that, in some of the most material acts, there is no ascertaining what is intended to be law or what not. This mistake was fallen into, I suppose, from the late practice of sending home the bills refused by the governor, with his proposed amendments certified by the clerk of the House, and under the great seal, that the true state of such refused bills might be known here; but, when bills are passed into laws, the copies to be sent here should be taken from the Rolls Office after the laws are deposited there, and

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certified by the Master of the Rolls to be true copies; and then the governor, under the great seal, certifies that the Master of the Rolls is such an officer, and that credit ought to be given to his certificate; or otherwise that those copies are true copies, agreeable to the laws passed by him as governor. But the certificates with these laws only express that such bills were sent up to him for his assent on such a day; that he proposed the annexed amendment on such a day, and on such a day he passed the bills without saying a word whether the amendments were agreed to or not. Indeed, by the part of the minutes which came [1]——

CLXXXI

TO MRS. DEBORAH FRANKLIN

LONDON, 5 March, 1760.

MY DEAR CHILD:—I received the enclosed some time since from Mr. Strahan. I afterwards spent an evening in conversation with him on the subject. He was very urgent with me to stay in England, and prevail with you to remove hither with Sally. He proposed several advantageous schemes to me, which appeared reasonably founded. His family is a very agreeable one: Mrs. Strahan, a sensible and good woman, the children of amiable characters, and particularly the young man, who is sober, ingenious, and industrious, and a desirable person. In point

[1] The remainder of the letter is lost.

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of circumstances there can be no objection, Mr. Strahan being in such a way as to lay up a thousand pounds every year from the profits of his business, after maintaining his family and paying all charges. I gave him, however, two reasons why I could not think of removing hither: one, my affection to Pennsylvania, and long established friendships and other connexions there; the other, your invincible aversion to crossing the seas. And without removing hither, I could not think of parting with my daughter to such a distance. I thanked him for the regard shown to us in the proposal, but gave him no expectation that I should forward the letters. So you are at liberty to answer or not, just as you think proper. Let me, however, know your sentiments. You need not deliver the letter to Sally, if you do not think it proper.

My best respects to Mr. Hughes, Mr. Bartram, and all inquiring friends. I am your ever loving husband,

B. Franklin.

P. S.—I have wrote several letters to you lately, but can now hardly tell by what ships.

CLXXXII

TO MISS MARY STEVENSON

Craven Street, 1 May, 1760.

I embrace, most gladly, my dear friend's proposal of a subject for our future correspondence; not only

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as it will occasion my hearing from her more frequently, but as it will lay me under a necessity of improving my own knowledge, that I may be better able to assist in her improvement. I only fear my necessary business and journeys, with the natural indolence of an old man, will make me too unpunctual a correspondent. For this I must hope some indulgence. But why will you, by the cultivation of your mind, make yourself still more amiable, and a more desirable companion for a man of understanding, when you are determined, as I hear, to live single? If we enter, as you propose, into *moral* as well as natural philosophy, I fancy, when I have established my authority as a tutor, I shall take upon me to lecture you a little on the chapter of duty.

But, to be serious, our easiest mode of proceeding, I think, will be for you to read some books that I may recommend to you; and, in the course of your reading, whatever occurs that you do not thoroughly apprehend, or that you clearly conceive and find pleasure in, may occasion either some questions for further information, or some observations that show how far you are satisfied and pleased with your author. These will furnish matter for your letters to me, and, in consequence, mine also to you.

Let me know, then, what books you have already perused on the subject intended, that I may the better judge what to advise for your next reading. And believe me ever, my dear good girl, your affectionate friend and servant,

B. Franklin.

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CLXXXIII

TO LORD KAMES

LONDON, 3 May, 1760.

MY DEAR LORD:—I have endeavoured to comply with your request in writing something on the present situation of our affairs in America, in order to give more correct notions of the British interest with regard to the colonies, than those I found many sensible men possessed of. Enclosed you have the production, such as it is. I wish it may, in any degree, be of service to the public. I shall at least hope this from it, for my own part, that you will consider it as a letter from me to you, and take its length as some excuse for being so long a coming.[1]

I am now reading with great pleasure and improvement your excellent work, *The Principles of Equity*. It will be of the greatest advantage to the judges in our colonies, not only in those which have courts of chancery, but also in those which, having no such courts, are obliged to mix equity with common law. It will be of more service to the colony judges, as few of them have been bred to the law. I have sent a book to a particular friend, one of the judges of the Supreme Court in Pennsylvania.

I will shortly send you a copy of the "Chapter" you are pleased to mention in so obliging a manner; and shall be extremely obliged in receiving a copy of the collection of *Maxims for the Conduct of Life*,

[1] This was probably the tract, entitled *The Interest of Great Britain Considered*, which was first published in 1760.

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which you are preparing for the use of your children. I purpose likewise a little work for the benefit of youth, to be called *The Art of Virtue*. From the title I think you will hardly conjecture what the nature of such a book may be. I must therefore explain it a little. Many people lead bad lives that would gladly lead good ones, but do not know *how* to make the change. They have frequently *resolved* and *endeavoured* it; but in vain, because their endeavours have not been properly conducted. To expect people to be good, to be just, to be temperate, &c., without *showing* them *how* they should *become* so, seems like the ineffectual charity mentioned by the Apostle, which consists in saying to the hungry, the cold, and the naked, "Be ye fed, be ye warmed, be ye clothed," without showing them how they should get food, fire, or clothing.

Most people have naturally *some* virtues, but none have naturally *all* the virtues. To *acquire* those that are wanting, and secure what we acquire, as well as those we have naturally, is as properly an art as painting, navigation, or architecture. If a man would become a painter, navigator, or architect, it is not enough that he is *advised* to be one, that he is *convinced* by the arguments of his adviser that it would be for his advantage to be one, and that he resolves to be one, but he must also be taught the principles of the art, be shown all the methods of working, and how to acquire the habits of using properly all the instruments; and thus regularly and gradually he arrives, by practice, at some perfection in the art. If he does not proceed thus, he

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is apt to meet with difficulties that discourage him, and make him drop the pursuit.

My *Art of Virtue* has also its instruments, and teaches the manner of using them. Christians are directed to have faith in Christ, as the effectual means of obtaining the change they desire. It may, when sufficiently strong, be effectual with many; for a full opinion, that a teacher is infinitely wise, good, and powerful, and that he will certainly reward and punish the obedient and disobedient, must give great weight to his precepts, and make them much more attended to by his disciples. But many have this faith in so weak a degree, that it does not produce the effect. Our *Art of Virtue* may, therefore, be of great service to those whose faith is unhappily not so strong, and may come in aid of its weakness. Such as are naturally well disposed, and have been so carefully educated, as that good habits have been early established, and bad ones prevented, have less need of this art; but all may be more or less benefited by it. It is, in short, to be adapted for universal use. I imagine what I have now been writing will seem to savour of great presumption. I must therefore speedily finish my little piece, and communicate the manuscript to you, that you may judge whether it is possible to make good such pretensions. I shall at the same time hope for the benefit of your corrections. I am, &c.,

B. FRANKLIN.

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CLXXXIV

TO PETER FRANKLIN[1]

LONDON, 7 May, 1760.

—— It has, indeed, as you observe, been the opinion of some very great naturalists, that the sea is salt only from the dissolution of mineral or rock salt, which its waters happened to meet with. But this opinion takes it for granted, that all water was originally fresh, of which we can have no proof. I own I am inclined to a different opinion, and rather think all the water on this globe was originally salt, and that the fresh water we find in springs and rivers, is the produce of distillation. The sun raises the vapors from the sea, which form clouds, and fall in rain upon the land, and springs and rivers are formed of that rain. As to the rock salt found in mines, I conceive that, instead of communicating its saltness to the sea, it is itself drawn from the sea, and that of course the sea is now fresher than it was originally. This is only another effect of nature's distillery, and might be performed various ways.

It is evident from the quantities of sea-shells and the bones and teeth of fishes found in high lands, that the sea has formerly covered them. Then, either the sea has been higher than it now is, and has fallen away from those high lands, or they have been lower than they are, and were lifted up out of the water to their present height, by some internal mighty force, such as we still feel some remains of,

[1] An elder brother of the author, who resided many years at Newport, in Rhode Island.

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when whole continents are moved by earthquakes. In either case, it may be supposed that large hollows, or valleys among hills, might be left filled with sea-water, which evaporating, and the fluid part drying away in a course of years, would leave the salt covering the bottom; and that salt, coming afterwards to be covered with earth from the neighbouring hills, could only be found by digging through that earth. Or, as we know from their effects, that there are deep, fiery concerns under the earth, and even under the sea, if at any time the sea leaks into any of them, the fluid parts of the water must evaporate from that heat, and pass off through some volcano, while the salt remains, and by degrees, and continual accretion, becomes a great mass. Thus the cavern may at length be filled, and the volcano connected with it cease burning, as many it is said have done; and future miners, penetrating such cavern, find what we call a salt-mine. This is a fancy I had on visiting the salt-mines at Norwich, with my son. I send you a piece of the rock salt which he brought up with him out of the mine. I am, &c.,

B. FRANKLIN.

CLXXXV

TO ALEXANDER SMALL, LONDON

12 May, 1760.

DEAR SIR:—Agreeably to your request, I send you my reasons for thinking that our northeast storms in North America begin first, in point of

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time, in the southwest parts; that is to say, the air in Georgia, the farthest of our colonies to the southwest, begins to move southwesterly before the air of Carolina, which is the next colony northeastward; the air of Carolina has the same motion before the air of Virginia, which lies still more northeastward; and so on northeasterly through Pennsylvania, New York, New England, &c., quite to Newfoundland.

These northeast storms are generally very violent, continue sometimes two or three days, and often do considerable damage in the harbours along the coast. They are attended with thick clouds and rain.

What first gave me this idea, was the following circumstance. About twenty years ago, a few more or less, I cannot from my memory be certain, we were to have an eclipse of the moon at Philadelphia, on a Friday evening, about nine o'clock. I intended to observe it, but was prevented by a northeast storm, which came on about seven, with thick clouds as usual, that quite obscured the whole hemisphere. Yet when the post brought us the Boston newspaper, giving an account of the effects of the same storm in those parts, I found the beginning of the eclipse had been well observed there, though Boston lies northeast of Philadelphia about four hundred miles. This puzzled me, because the storm began with us so soon as to prevent any observation, and, being a northeast storm, I imagined it must have begun rather sooner in places farther to the northeastward than it did at Philadelphia. I therefore mentioned it in a letter to my brother, who lived at Boston; and he informed me the storm did not begin with them till

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near eleven o'clock, so that they had a good observation of the eclipse; and upon comparing all the other accounts I received from the several colonies, of the time of beginning of the same storm, and, since that, of other storms of the same kind, I found the beginning to be always later the farther northeastward. I have not my notes with me here in England, and cannot, from memory, say the proportion of time to distance, but I think it is about an hour to every hundred miles.

From thence I formed an idea of the cause of these storms, which I would explain by a familiar instance or two. Suppose a long canal of water stopped at the end by a gate. The water is quite at rest till the gate is open, then it begins to move out through the gate; the water next the gate is first in motion, and moves towards the gate; the water next to that first water moves next, and so on successively, till the water at the head of the canal is in motion, which is last of all. In this case, all the water moves indeed towards the gate, but the successive times of beginning motion are the contrary way, viz., from the gate backwards to the head of the canal. Again, suppose the air in a chamber at rest, no current through the room till you make a fire in the chimney. Immediately the air in the chimney, being rarefied by the fire, rises; the air next the chimney flows in to supply its place, moving towards the chimney; and, in consequence, the rest of the air successively, quite back to the door. Thus to produce our northeast storms, I suppose some great heat and rarefaction of the air in or

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about the Gulf of Mexico; the air thence rising has its place supplied by the next more northern, cooler, and therefore denser and heavier air; that, being in motion, is followed by the next more northern air, &c., &c., in a successive current, to which current our coast and inland ridge of mountains give the direction of northeast, as they lie northeast and southwest.

This I offer only as an hypothesis to account for this particular fact; and perhaps, on farther examination, a better and truer may be found. I do not suppose all storms generated in the same manner. Our northwest thunder-gusts in America, I know are not; but of them I have written my opinion fully in a paper which you have seen. I am, &c.,

B. FRANKLIN.

CLXXXVI

TO MISS STEVENSON, AT WANSTEAD

CRAVEN STREET, 16 May, 1760.

I send my good girl the books I mentioned to her last night. I beg her to accept of them as a small mark of my esteem and friendship. They are written in the familiar, easy manner, for which the French are so remarkable; and afford a good deal of philosophic and practical knowledge, unembarrassed with the dry mathematics used by more exact reasoners, but which is apt to discourage young beginners.

I would advise you to read with a pen in your

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hand, and enter in a little book short hints of what you find that is curious, or that may be useful; for this will be the best method of imprinting such particulars in your memory, where they will be ready, either for practice on some future occasion, if they are matters of utility, or at least to adorn and improve your conversation, if they are rather points of curiosity. And as many of the terms of science are such, as you cannot have met with in your common reading, and may therefore be unacquainted with, I think it would be well for you to have a good dictionary at hand, to consult immediately when you meet with a word you do not comprehend the precise meaning of. This may at first seem troublesome and interrupting; but it is a trouble that will daily diminish, as you will daily find less and less occasion for your dictionary, as you become more acquainted with the terms; and in the mean time you will read with more satisfaction, because with more understanding.

When any point occurs, in which you would be glad to have farther information than your book affords you, I beg you would not in the least apprehend that I should think it a trouble to receive and answer your questions. It will be a pleasure, and no trouble. For though I may not be able, out of my own little stock of knowledge, to afford you what you require, I can easily direct you to the books, where it may most readily be found. Adieu, and believe me ever, my dear friend, yours affectionately,

B. Franklin.

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CLXXXVII

TO MISS MARY STEVENSON

CRAVEN STREET, 11 June, 1760.

It is a very sensible question you ask, how the air can affect the barometer, when its opening appears covered with wood? If indeed it was so closely covered as to admit of no communication of the outward air to the surface of the mercury, the change of weight in the air could not possibly affect it. But the least crevice is sufficient for the purpose; a pinhole will do the business. And if you could look behind the frame to which your barometer is fixed, you would certainly find some small opening.

There are indeed some barometers in which the body of mercury at the lower end is contained in a close leather bag, and so the air cannot come into immediate contact with the mercury; yet the same effect is produced. For, the leather being flexible, when the bag is pressed by any additional weight of air, it contracts, and the mercury is forced up into the tube; when the air becomes lighter, and its pressure less, the weight of the mercury prevails, and it descends again into the bag.

Your observation on what you have lately read concerning insects is very just and solid. Superficial minds are apt to despise those who make that part of the creation their study, as mere triflers; but certainly the world has been much obliged to them. Under the care and management of man, the labors of the little silkworm afford employment

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and subsistence to thousands of families, and become an immense article of commerce. The bee, too, yields us its delicious honey, and its wax useful to a multitude of purposes. Another insect, it is said, produces the cochineal, from which we have our rich scarlet dye. The usefulness of the cantharides, or Spanish flies, in medicine, is known to all, and thousands owe their lives to that knowledge. By human industry and observation, other properties of other insects may possibly be hereafter discovered, and of equal utility. A thorough acquaintance with the nature of these little creatures may also enable mankind to prevent the increase of such as are noxious, or secure us against the mischiefs they occasion. These things doubtless your books make mention of; I can only add a particular late instance which I had from a Swedish gentleman of good credit. In the green timber, intended for ship-building at the King's yards in that country, a kind of worms were found, which every year became more numerous and more pernicious, so that the ships were greatly damaged before they came into use. The King sent Linnæus, the great naturalist, from Stockholm, to inquire into the affair, and see if the mischief was capable of any remedy. He found, on examination, that the worm was produced from a small egg, deposited in the little roughnesses on the surface of the wood, by a particular kind of fly or beetle; from which the worm, as soon as it was hatched, began to eat into the substance of the wood, and after some time came out again a fly of the parent kind, and so the species increased. The season in which the fly

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laid its eggs, Linnæus knew to be about a fortnight (I think) in the month of May, and at no other time in the year. He therefore advised, that, some days before that season, all the green timber should be thrown into the water, and kept under water till the season was over. Which being done by the King's order, the flies, missing their usual nests, could not increase; and the species was either destroyed or went elsewhere; and the wood was effectually preserved; for, after the first year, it became too dry and hard for their purpose.

There is, however, a prudent moderation to be used in studies of this kind. The knowledge of nature may be ornamental, and it may be useful; but if, to attain an eminence in that, we neglect the knowledge and practice of essential duties, we deserve reprehension. For there is no rank in natural knowledge of equal dignity and importance with that of being a good parent, a good child, a good husband or wife, a good neighbour or friend, a good subject or citizen—that is, in short, a good Christian. Nicholas Gimcrack, therefore, who neglected the care of his family, to pursue butterflies, was a just object of ridicule, and we must give him up as fair game to the satirist.

Adieu, my dear friend, and believe me ever

Yours affectionately,

B. FRANKLIN.

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CLXXXVIII

TO MRS. DEBORAH FRANKLIN

LONDON, 27 June, 1760.

MY DEAR CHILD:—I wrote a line to you by the packet to let you know we were well, and I promised to write you fully by Captain Budden, and answer all your letters, which I accordingly now sit down to do. I am concerned that so much trouble should be given you by idle reports concerning me. Be satisfied, my dear, that while I have my senses, and God vouchsafes me his protection, I shall do nothing unworthy the character of an honest man, and one that loves his family.

I have not yet seen Mr. Beatty, nor do I know where to write to him. He forwarded your letter to me from Ireland. The paragraph of your letter, inserted in the papers, related to the negro school. I gave it to the gentlemen concerned, as it was a testimony in favor of their pious design. But I did not expect they would print it with your name. They have since chosen me one of the Society, and I am at present chairman for the current year. I enclose you an account of their proceedings.[1]

[1] This relates to a scheme which had been set on foot by the philanthropic Dr. Thomas Bray, who passed a large part of his life in performing deeds of benevolence and charity. He became acquainted at The Hague with M. D'Allone, who approved and favored his schemes. M. D'Allone, during his lifetime, gave to Dr. Bray a considerable sum of money, which was to be applied to the conversion of negroes in the British Plantations, and at his death he left an additional sum of nine hundred pounds for the same object. Dr. Bray formed an association for the management and proper disposal of these funds. He died in 1730, and the same trust continued to be executed by a company of gentlemen, called "Dr. Bray's Associates." Dr. Franklin was for several years one of these associates.

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I did not receive the *Prospect of Quebec*, which you mention that you sent me. Peter continues with me, and behaves as well as I can expect, in a country where there are many occasions of spoiling servants, if they are ever so good. He has as few faults as most of them, and I see with only one eye and hear only with one ear; so we rub on pretty comfortably. King, that you inquire after, is not with us. He ran away from our house near two years ago, while we were absent in the country; but was soon found in Suffolk, where he had been taken into the service of a lady, that was very fond of the merit of making him a Christian, and contributing to his education and improvement. As he was of little use, and often in mischief, Billy consented to her keeping him while we stay in England. So the lady sent him to school, had him taught to read and write, to play on the violin and French horn, with some other accomplishments more useful in a servant. Whether she will finally be willing to part with him, or persuade Billy to sell him to her, I know not. In the mean time he is no expense to us.

The accounts you give me of the marriages of our friends are very agreeable. I love to hear of every thing that tends to increase the number of good people. You cannot conceive how shamefully the mode here is a single life. One can scarce be in the company of a dozen men of circumstance and fortune, but what it is odds that you find on inquiry eleven of them are single. The great complaint is the excessive expensiveness of English wives.

I am extremely concerned with you at the misfor-

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tune of our friend Mr. Griffith. How could it possibly happen? It was a terrible fire that of Boston. I shall contribute here towards the relief of the sufferers. Our relations have escaped, I believe, generally; but some of my particular friends must have suffered greatly.

I think you will not complain this year, as you did the last, of being so long without a letter. I have wrote to you very frequently; and shall not be so much out of the way of writing this summer as I was the last. I hope our friend Bartram is safely returned to his family. Remember me to him in the kindest manner.

Poor David Edwards died this day week, of a consumption. I had a letter from a friend of his, acquainting me that he had been long ill, and incapable of doing business, and was at board in the country. I feared he might be in straits, as he never was prudent enough to lay up any thing. So I wrote to him immediately, that, if he had occasion, he might draw on me for five guineas. But he died before my letter got to hand. I hear the woman, at whose house he long lodged and boarded, has buried him and taken all he left, which could not be much, and there are some small debts unpaid. He maintained a good character at Bury, where he lived some years, and was well respected, to my knowledge, by some persons of note there. I wrote to you before, that we saw him at Bury, when we went through Suffolk into Norfolk, the year before last. I hope his good father, my old friend, continues well.

Give my duty to mother, and love to my dear

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Sally. Remember me affectionately to all inquiring friends, and believe me ever, my dearest Debby, your loving husband,

B. FRANKLIN.

CLXXXIX

TO MISS MARY STEVENSON

LONDON, 13 September, 1760.

MY DEAR FRIEND:—I have your agreeable letter from Bristol, which I take this first leisure hour to answer, having for some time been much engaged in business.

Your first question, *What is the reason the water at this place, though cold at the spring, becomes warm by pumping?* it will be most prudent in me to forbear attempting to answer, till, by a more circumstantial account, you assure me of the fact. I own I should expect that operation to warm, not so much the water pumped as the person pumping. The rubbing of dry solids together has been long observed to produce heat; but the like effect has never yet, that I have heard, been produced by the mere agitation of fluids, or friction of fluids with solids. Water in a bottle, shook for hours by a mill-hopper, it is said, discovered no sensible addition of heat. The production of animal heat by exercise is therefore to be accounted for in another manner, which I may hereafter endeavour to make you acquainted with.

This prudence of not attempting to give reasons before one is sure of facts, I learned from one of your

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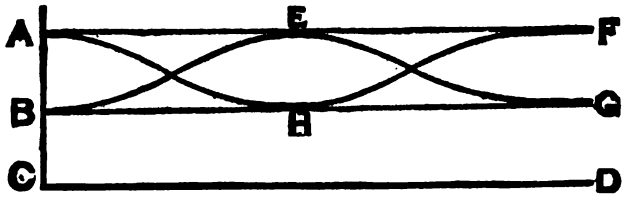
sex, who, as Selden tells us, being in company with some gentlemen that were viewing and considering something which they called a Chinese shoe, and disputing earnestly about the manner of wearing it, and how it could possibly be put on, put in her word, and said modestly, *Gentlemen, are you sure it is a shoe? Should not that be settled first?*

But I shall now endeavour to explain what I said to you about the tide in rivers, and to that end shall make a figure, which, though not very like a river may serve to convey my meaning. Suppose a canal one hundred and forty miles long, communicating at one end with the sea, and filled therefore with sea water. I choose a canal at first, rather than a river, to throw out of consideration the effects produced by the streams of fresh water from the land, the inequality in breadth, and the crookedness of courses.



Let A C be the head of the canal; C D, the bottom of it; D F, the open mouth of it, next the sea. Let the straight pricked line B G represent low-water mark, the whole length of the canal; A F, high-water mark. Now if a person, standing at E, and observing, at the time of high water there, that the canal is quite full at that place up to the line E, should conclude that the canal is equally full to the

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same height from end to end, and therefore there was as much more water come into the canal since it was down at low-water mark as would be included in the oblong space A B G F, he would be greatly mistaken. For the tide is *a wave*, and the top of the wave, which makes high water, as well as every other lower part, is progressive; and it is high water successively, but not at the same time, in all the several points between G F and A B. And in such a length as I have mentioned it is low water at F G, and also at A B, at or near the same time with its being high water at E; so that the surface of the water in the canal, during that situation, is properly represented by the curve pricked line B E G. And, on the other hand, when it is low water at E H, it is high water both at F G and at A B, at or near the same time; and the surface would then be described by the inverted curve line, A H F.

In this view of the case, you will easily see that there must be very little more water in the canal at what we call high water, than there is at low water, those terms not relating to the whole canal at the same time, but successively to its parts. And, if you suppose the canal six times as long, the case would not vary as to the quantity of water at different times of the tide; there would only be six waves in the canal at the same time, instead of one, and the hollows in the water would be equal to the hills.

That this is not mere theory, but conformable to fact, we know by our long rivers in America. The Delaware, on which Philadelphia stands, is in this particular similar to the canal I have supposed of

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one wave; for, when it is high water at the Capes or mouth of the river, it is also high water at Philadelphia, which stands about one hundred and forty miles from the sea; and there is at the same time a low water in the middle between the two high waters; where, when it comes to be high water, it is at the same time low water at the Capes and at Philadelphia. And the longer rivers have some a wave and a half, some two, three, or four waves, according to their length. In the shorter rivers of this island, one may see the same thing in part; for instance, it is high water at Gravesend an hour before it is high water at London Bridge; and twenty miles below Gravesend, an hour before it is high water at Gravesend. Therefore at the time of high water at Gravesend the top of the wave is there, and the water is then not so high by some feet where the top of the wave was an hour before, or where it will be an hour after, as it is just then at Gravesend.

Now we are not to suppose, because the swell or top of the wave runs at the rate of twenty miles an hour, that therefore the current, or water itself of which the wave is composed, runs at that rate. Far from it. To conceive this motion of a wave, make a small experiment or two. Fasten one end of a cord in a window near the top of a house, and let the other end come down to the ground; take this end in your hand, and you may, by a sudden motion, occasion a wave in the cord that will run quite up to the window; but though the wave is progressive from your hand to the window, the parts of the rope do not proceed with the wave, but remain where

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they were, except only that kind of motion that produces the wave. So if you throw a stone into a pond of water when the surface is still and smooth, you will see a circular wave proceed from the stone as its centre, quite to the sides of the pond; but the water does not proceed with the wave, it only rises and falls to form it in the different parts of its course; and the waves that follow the first, all make use of the same water with their predecessors.

But a wave in water is not indeed in all circumstances exactly like that in a cord; for, water being a fluid, and gravitating to the earth, it naturally runs from a higher place to a lower; therefore the parts of the wave in water do actually run a little both ways from its top towards its lower sides, which the parts of the wave in the cord cannot do. Thus, when it is high and standing water at Gravesend, the water twenty miles below has been running ebb, or towards the sea for an hour, or ever since it was high water there; but the water at London Bridge will run flood, or from the sea yet another hour, till it is high water, or the top of the wave arrives at that bridge, and then it will have run ebb an hour at Gravesend, &c., &c. Now this motion of the water, occasioned only by its gravity, or tendency to run from a higher place to a lower, is by no means so swift as the motion of its wave. It scarce exceeds perhaps two miles in an hour.

If it went, as the wave does, twenty miles an hour, no ships could ride at anchor in such a stream, nor boats row against it.

In common speech, indeed, this current of the

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water both ways from the top of the wave is called *the tide;* thus we say *the tide runs strong, the tide runs at the rate of one, two, or three miles an hour,* &c., and when we are at a part of the river behind the top of the wave, and find the water lower than high-water mark, and running towards the sea, we say *the tide runs ebb;* and when we are before the top of the wave, and find the water higher than low-water mark, and running from the sea, we say *the tide runs flood;* but these expressions are only locally proper; for a tide, strictly speaking, is *one whole wave,* including all its parts higher and lower, and these waves succeed one another about twice in twenty-four hours.

This motion of the water, occasioned by its gravity, will explain to you why the water near the mouths of rivers may be salter at high water than at low. Some of the salt water, as the tide wave enters the river, runs from its top and fore side, and mixes with the fresh, and also pushes it back up the river.

Supposing that the water commonly runs during the flood at the rate of two miles in an hour, and that the flood runs five hours, you see that it can bring at most into our canal only a quantity of water equal to the space included in the breadth of the canal, ten miles of its length, and the depth between low and high-water mark; which is but a fourteenth part of what would be necessary to fill all the space between low and high-water mark for one hundred and forty miles, the whole length of the canal.

And indeed such a quantity of water as would fill

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that whole space, to run in and out every tide, must create so outrageous a current, as would do infinite damage to the shores, shipping, &c., and make the navigation of a river almost impracticable.

I have made this letter longer than I intended, and therefore reserve for another what I have further to say on the subject of tides and rivers. I shall now only add that I have not been exact in the numbers, because I would avoid perplexing you with minute calculations, my design at present being chiefly to give you distinct and clear ideas of the first principles.

After writing six folio pages of philosophy to a young girl, is it necessary to finish such a letter with a compliment? Is not such a letter of itself a compliment? Does it not say she has a mind thirsty after knowledge, and capable of receiving it; and that the most agreeable things one can write to her are those that tend to the improvement of her understanding? It does indeed say all this, but then it is still no compliment; it is no more than plain honest truth, which is not the character of a compliment. So if I would finish my letter in the *mode*, I should yet add something that means nothing, and is *merely* civil and polite. But, being naturally awkward at every circumstance of ceremony, I shall not attempt it. I had rather conclude abruptly with what pleases me more than any compliment can please you, that I am allowed to subscribe myself

Your affectionate friend,

B. FRANKLIN.

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CXC

THE INTEREST OF GREAT BRITAIN CONSIDERED, WITH REGARD TO HER COLONIES AND THE ACQUISITIONS OF CANADA AND GUADALOUPE [1]

I have perused with no small pleasure, the *Letter Addressed to Two Great Men*, and the *Remarks* on that letter. It is not merely from the beauty, the force, and perspicuity of expression, or the general elegance of manner, conspicuous in both pamphlets, that my pleasure chiefly arises; it is rather from this, that I have lived to see subjects of the greatest importance to this nation publicly discussed without party views or party heat, with decency and politeness, and with no other warmth than what a zeal for the honor and happiness of our King and country may inspire; and this by writers whose understand-

[1] When the war with France was drawing to its close, the question whether Canada was to be given up to the French or retained as a set-off for acquisitions in the West Indies was much and warmly debated. The Earl of Bath published a *Letter to Two Great Men* (Pitt and Newcastle), recommending the retention of Canada as the more valuable; and shortly afterwards *Remarks on the Letter to Two Great Men*, attributed by some to Edmund Burke, and by some to William Burke, appeared,—the writer preferring Guadeloupe to Canada.

At this stage of the debate Franklin contributed this pamphlet to the discussion. It provoked a reply, supposed also to have been written by Burke, who stated that he should confine his remarks to the writer of this performance, because of all those who had treated the opposite side of the question "he is clearly the ablest, the most ingenious, the most dexterous, and the most perfectly acquainted with the *fort* and *faible* of the argument, and we may therefore conclude that he has said every thing in the best manner that the cause would bear."

It is difficult now to understand how such a debate could have been provoked by such a question, and not at all surprising that Franklin's view prevailed.—EDITOR.

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ing, however they may differ from each other, appears not unequal to their candor and the uprightness of their intention.

But, as great abilities have not always the best information, there are, I apprehend, in the *Remarks* some opinions not well founded, and some mistakes of so important a nature, as to render a few observations on them necessary for the better information of the public.

The author of the *Letter*, who must be every way best able to support his own sentiments, will, I hope, excuse me, if I seem officiously to interfere; when he considers, that the spirit of patriotism, like other qualities good and bad, is catching, and that his long silence, since the *Remarks* appeared, has made us despair of seeing the subject farther discussed by his masterly hand. The ingenious and candid Remarker, too, who must have been misled himself, before he employed his skill and address to mislead others, will certainly, since he declares he *aims at no seduction*, be disposed to excuse even the weakest effort to prevent it.

And surely, if the general opinions that possess the minds of the people may possibly be of consequence in public affairs, it must be fit to set those opinions right. If there is danger, as the Remarker supposes, that "extravagant expectations" may embarass "a virtuous and able ministry," and "render the negotiation for peace a work of infinite difficulty," [1] there is no less danger that expectations too low, through want of proper information, may have

[1] *Remarks*, p. 6.

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a contrary effect; may make even a virtuous and able ministry less anxious and less attentive to the obtaining points, in which the honor and interest of the nation are essentially concerned; and the people less hearty in supporting such a ministry and its measures.

The people of this nation are indeed respectable, not for their numbers only, but for their understanding and their public spirit. They manifest the first by their universal approbation of the late prudent and vigorous measures, and the confidence they so justly repose in a wise and good prince, and an honest and able administration; the latter they have demonstrated by the immense supplies granted in Parliament unanimously, and paid through the whole kingdom with cheerfulness. And since to this spirit and these supplies our "victories and successes" [1] have, in great measure, been owing, is it quite right, is it generous, to say, with the Remarker, that the people "had no share in acquiring them"? The mere mob he cannot mean, even where he speaks of the madness of the people; for the madness of the mob must be too feeble and impotent, armed as the government of this country at present is, to "overrule," [2] even in the slightest instances, the virtue "and moderation" of a firm and steady ministry.

While the war continues, its final event is quite uncertain. The victorious of this year may be the vanquished of the next. It may therefore be too early to say, what advantages we ought absolutely to insist on, and make the *sine quibus non* of a peace.

[1] *Remarks*, p. 7. [2] *Ibid.*, p. 7.

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If the necessity of our affairs should oblige us to accept of terms less advantageous than our present successes seem to promise us, an intelligent people, as ours is, must see that necessity, and will acquiesce. But as a peace, when it is made, may be made hastily; and as the unhappy continuance of the war affords us time to consider, among several advantages gained or to be gained, which of them may be most for our interest to retain, if some and not all may possibly be retained, I do not blame the public disquisition of these points as premature or useless. Light often arises from a collision of opinions, as fire from flint and steel; and if we can obtain the benefit of the *light*, without danger from the *heat* sometimes produced by controversy, why should we discourage it?

Supposing then that Heaven may still continue to bless his Majesty's arms, and that the event of this just war may put it in our power to retain some of our conquests at the making of a peace; let us consider:

1. *The Security of a Dominion, a justifiable and prudent Ground upon which to demand Cessions from an Enemy.*

Whether we are to confine ourselves to those possessions only that were "the objects for which we began the war."[1] This the Remarker seems to think right, when the question relates to "*Canada, properly so-called;* it having never been mentioned

[1] *Remarks*, p. 19.

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as one of those objects, in any of our memorials or declarations, or in any national or public act whatsoever." But the gentleman himself will probably agree, that if the cession of Canada would be a real advantage to us, we may demand it under his second head, as an "*indemnification* for the charges incurred" in recovering our just rights; otherwise, according to his own principles, the demand of Guadaloupe can have no foundation. That "our claims before the war were large enough for possession and for security too,"[1] though it seems a clear point with the ingenious Remarker, is, I own, not so with me. I am rather of the contrary opinion, and shall presently give my reasons.

But first let me observe that we did not make those claims because they were large enough for security, but because we could rightfully claim no more. Advantages gained in the course of this war may increase the extent of our rights. Our claims before the war contained *some* security; but that is no reason why we should neglect acquiring *more* when the demand of more is become reasonable. It may be reasonable in the case of America to ask for the security recommended by the author of the Letter,[2] though it would be preposterous to do it in many cases. His proposed demand is founded on the little value of Canada to the French; the right we have to ask, and the power we may have to insist on, an indemnification for our expenses; the difficulty the French themselves will be under of re-

[1] *Remarks*, p. 19.

[2] Page 30 of the *Letter*, and p. 21 of the *Remarks*.

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straining their restless subjects in America from encroaching on our limits and disturbing our trade; and the difficulty on our part of preventing encroachments that may possibly exist many years without coming to our knowledge.

But the Remarker "does not see why the arguments employed concerning a security for a peaceable behaviour in Canada would not be equally cogent for calling for the same security in Europe." [1] On a little farther reflection, he must, I think, be sensible that the circumstances of the two cases are widely different. *Here* we are separated by the best and clearest of boundaries, the ocean, and we have people in or near every part of our territory. Any attempt to encroach upon us by building a fort, even in the obscurest corner of these Islands, must therefore be known and prevented immediately. The aggressors also must be known, and the nation they belong to would be accountable for their aggression. In America it is quite otherwise. A vast wilderness, thinly or scarce at all peopled, conceals with ease the march of troops and workmen. Important passes may be seized within our limits, and forts built in a month, at a small expense, that may cost us an age and a million to remove. Dear experience has taught this. But what is still worse, the wide-extended forests between our settlements and theirs are inhabited by barbarous tribes of savages that delight in war, and take pride in murder; subjects properly neither of the French nor English, but strongly attached to the former by the art and

[1] *Remarks*, p. 28.

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indefatigable industry of priests, similarity of superstitions, and frequent family alliances. These are easily, and have been continually, instigated to fall upon and massacre our planters, even in times of full peace between the two crowns, to the certain diminution of our people and the contraction of our settlements.[1] And though it is known they are supplied by the French, and carry their prisoners to them, we can, by complaining, obtain no redress, as the governors of Canada have a ready excuse, that

[1] Dr. Clarke, in his *Observations on the Late and Present Conduct of the French*, etc., printed at Boston, 1755, says:

"The Indians in the French interest are, upon all proper opportunities, *instigated by their priests* (who have generally the chief management of their public councils) to acts of hostility against the English, even in time of profound peace between the two crowns. Of this there are many undeniable instances. The war between the Indians and the colonies of the Massachusetts Bay and New Hampshire, in 1733, by which those colonies suffered so much damage, was begun by the instigation of the French; their supplies were from them; and there are now original letters of several Jesuits to be produced, whereby it evidently appears that they were continually animating the Indians, when almost tired with the war, to a further prosecution of it. The French not only excited the Indians, and supported them, but joined their own forces with them in all the late hostilities that have been committed within his Majesty's province of Nova Scotia. And from an intercepted letter this year from the Jesuits at Penobscot, and from other information, it is certain that they have been using their utmost endeavours to excite the Indians to new acts of hostility against his Majesty's colony of the Massachusetts Bay; and some have been committed. The French not only excite the Indians to acts of hostility, but reward them for it, by *buying the English prisoners of them*, for the ransom of each of which they afterwards demand of us the price that is usually given for a slave in these colonies. They do this under the specious pretence of rescuing the poor prisoners from the cruelties and barbarities of the savages; but in reality to encourage them to continue their depredations, as they can by this means get more by hunting the English than by hunting wild beasts; and the French, at the same time, are thereby enabled to keep up a large body of Indians, entirely at *the expense of the English*."

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the Indians are an independent people, over whom they have no power, and for whose actions they are, therefore, not accountable. Surely circumstances so widely different may reasonably authorize different demands of security in America from such as are usual or necessary in Europe.

The Remarker, however, thinks that our real dependence for keeping "France or any other nation true to her engagements must not be in demanding securities, which no nation whilst *independent* can give, but on our own strength and our own vigilance." [1] No nation that has carried on a war with disadvantage, and is unable to continue it, can be said under such circumstances to be *independent;* and, while either side thinks itself in a condition to demand an indemnification, there is no man in his senses but will, *cæteris paribus*, prefer an indemnification that is a cheaper and more effectual security than any other he can think of. Nations in this situation demand and cede countries by almost every treaty of peace that is made. The French part of the island of St. Christopher's was added to Great Britain in circumstances altogether similar to those in which a few months may probably place the country of Canada. Farther security has always been deemed a motive with a conqueror to be less moderate; and even the *vanquished* insist upon security as a reason for demanding what they acknowledge they could not otherwise properly ask.

The security of the frontier of France *on the side of the Netherlands* was always considered in the

[1] *Remarks*, p. 25.

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negotiation that began at Gertrudenberg and ended with that war. For the same reason they demanded and had Cape Breton. But a war, concluded to the advantage of France, has always added something to the power, either of France or the House of Bourbon. Even that of 1733, which she commenced with declarations of her having no ambitious views, and which finished by a treaty at which the ministers of France repeatedly declared, that she desired nothing for herself, in effect gained for her Lorraine, an indemnification ten times the value of all her North American possessions.

In short, security and quiet of princes and states have ever been deemed sufficient reasons, when supported by power, for disposing of rights; and such dispositions have never been looked on as want of moderation. It has always been the foundation of the most general treaties. The security of Germany was the argument for yielding considerable possessions there to the Swedes; and the security of Europe divided the Spanish monarchy by the partition treaty, made between powers who had no other right to dispose of any part of it. There can be no cession, that is not supposed at least to increase the power of the party to whom it is made. It is enough that he has a right to ask it, and that he does it not merely to serve the purposes of a dangerous ambition.

Canada, in the hands of Britain, will endanger the kingdom of France as little as any other cession; and from its situation and circumstances cannot be hurtful to any other state. Rather, if peace be an advantage, this cession may be such to all Europe.

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The present war teaches us, that disputes arising in America may be an occasion of embroiling nations, who have no concerns there. If the French remain in Canada and Louisiana, fix the boundaries as you will between us and them, we must border on each other for more than fifteen hundred miles. The people that inhabit the frontiers are generally the refuse of both nations, often of the worst morals, and the least discretion; remote from the eye, the prudence, and the restraint of government. Injuries are therefore frequently, in some part or other of so long a frontier, committed on both sides, resentment provoked, the colonies are first engaged, and then the mother countries. And two great nations can scarce be at war in Europe, but some other prince or state thinks it a convenient opportunity to revive some ancient claim, seize some advantage, obtain some territory, or enlarge some power at the expense of a neighbour. The flames of war, once kindled, often spread far and wide, and the mischief is infinite. Happy it proved to both nations, that the Dutch were prevailed on finally to cede the New Netherlands (now the province of New York) to us at the peace of 1674; a peace that has ever since continued between us, but must have been frequently disturbed, if they had retained the possession of that country, bordering several hundred miles on our colonies of Pennsylvania westward, Connecticut and the Massachusetts eastward. Nor is it to be wondered at, that people of different language, religion, and manners, should in those remote parts engage in frequent quarrels, when we find that

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even the people of our own colonies have frequently been so exasperated against each other, in their disputes about boundaries, as to proceed to open violence and bloodshed.

2. *Erecting Forts in the back Settlements, almost in no Instance a sufficient Security against the Indians and the French; but the Possession of Canada implies every Security, and ought to be had, while in our Power.*

But the Remarker thinks we shall be sufficiently secure in America, if we "raise English forts at such passes as may at once make us respectable to the French and to the Indian nations.[1] The security desirable in America may be considered as of three kinds: 1. A security of possession, that the French shall not drive us out of the country. 2. A security of our planters from the inroads of savages, and the murders committed by them. 3. A security that the British nation shall not be obliged, on every new war, to repeat the immense expense occasioned by this, to defend its possessions in America.

Forts in the most important passes may, I acknowledge, be of use to obtain the *first* kind of security; but, as those situations are far advanced beyond the inhabitants, the expense of maintaining and supplying the garrisons will be very great, even in time of full peace, and immense on every interruption of it; as it is easy for skulking parties of the enemy, in such long roads through the woods, to

[1] *Remarks*, p. 25.

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intercept and cut off our convoys, unless guarded continually by great bodies of men.

The *second* kind of security will not be obtained by such forts, unless they were connected by a wall like that of China, from one end of our settlements to the other. If the Indians, when at war, marched like the Europeans, with great armies, heavy cannon, baggage, and carriages; the passes through which alone such armies could penetrate our country, or receive their supplies, being secured, all might be sufficiently secure. But the case is widely different; they go to war, as they call it, in small parties; from fifty men down to five. Their hunting life has made them acquainted with the whole country, and scarce any part of it is impracticable to such a party. They can travel through the woods even by night, and know how to conceal their tracks. They pass easily between your forts undiscovered; and privately approach the settlements of your frontier inhabitants. They need no convoys of provisions to follow them; for whether they are shifting from place to place in the woods, or lying in wait for an opportunity to strike a blow, every thicket and every stream furnishes so small a number with sufficient subsistence. When they have surprised separately and murdered and scalped a dozen families, they are gone with inconceivable expedition through unknown ways; and it is very rare that pursuers have any chance of coming up with them. In short, long experience has taught our planters that they cannot rely upon forts as a security against Indians; the inhabitants of Hackney might as well rely upon the

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Tower of London, to secure them against highwaymen and housebreakers.

As to the *third* kind of security, that we shall not in a few years, have all we have done to do over again in America, and be obliged to employ the same number of troops and ships, at the same immense expense, to defend our possessions there, while we are in proportion weakened here; such forts, I think, cannot prevent this. During a peace, it is not to be doubted the French, who are adroit at fortifying, will likewise erect forts in the most advantageous places of the country we leave them; which will make it more difficult than ever to be reduced in case of another war. We know, by experience of this war, how extremely difficult it is to march an army through the American woods, with its necessary cannon and stores, sufficient to reduce a very slight fort. The accounts at the treasury will tell you what amazing sums we have necessarily spent in the expeditions against two very trifling forts, Duquesne and Crown Point. While the French retain their influence over the Indians, they can easily keep our long-extended frontier in continual alarm, by a very few of those people; and, with a small number of regulars and militia, in such a country, we find they can keep an army of ours in full employ for several years. We therefore shall not need to be told by our colonies, that if we leave Canada, however circumscribed, to the French, "we have done nothing"[1]; we shall soon be made sensible *ourselves* of this truth, and to our cost.

[1] *Remarks*, p. 26.

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I would not be understood to deny, that even if we subdue and take Canada, some *few forts* may be of use to secure the goods of the traders, and protect the commerce, in case of any sudden misunderstanding with any tribe of Indians; but these forts will be best under the care of the colonies interested in the Indian trade, and garrisoned by their provincial forces, and at their own expense. Their own interest will then induce the American governments to take care of such forts in proportion to their importance, and see that the officers keep their corps full, and mind their duty. But any troops of ours placed there, and accountable here, would in such remote and obscure places, and at so great a distance from the eye and inspection of superiors, soon become of little consequence, even though the French were left in possession of Canada. If the four independent companies, maintained by the crown in New York more than forty years, at a great expense, consisted, for most part of the time, of faggots chiefly; if their officers enjoyed their places as sinecures, and were only, as a writer [1] of that country styles them, a kind of military monks; if this was the state of troops posted in a populous country, where the imposition could not be so well concealed, what may we expect will be the case of those that shall be posted two, three, or four hundred miles from the inhabitants, in such obscure and remote places as Crown Point, Oswego, Duquesne, or Niagara? They would scarce be even faggots; they would dwindle to mere names upon paper, and appear nowhere but upon the muster-rolls.

[1] Douglass.

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Now all the kinds of security we have mentioned are obtained by subduing and *retaining* Canada. Our present possessions in America are secured; our planters will no longer be massacred by the Indians, who, depending absolutely on us for what are now become the necessaries of life to them (guns, powder, hatchets, knives, and clothing), and having no other Europeans near, that can either supply them, or instigate them against us, there is no doubt of their being always disposed, if we treat them with common justice, to live in perpetual peace with us. And, with regard to France, she cannot, in case of another war, put us to the immense expense of defending that long-extended frontier; we shall then, as it were, have our backs against a wall in America; the sea-coast will be easily protected by our superior naval power; and here "our own watchfulness and our own strength" will be properly, and cannot but be successfully, employed. In this situation, the force now employed in that part of the world may be spared for any other service here or elsewhere; so that both the offensive and defensive strength of the British empire, on the whole, will be greatly increased.

But to leave the French in possession of Canada, when it is in our power to remove them, and depend (as the Remarker proposes) on our own "strength and watchfulness"[1] to prevent the mischiefs that may attend it, seems neither safe nor prudent. Happy as we now are, under the best of kings, and in the prospect of a succession promising every felicity

[1] *Remarks*, p. 25.

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a nation was ever blessed with; happy, too, in the wisdom and vigor of every part of the administration, we cannot, we ought not to promise ourselves the uninterrupted continuance of those blessings. The safety of a considerable part of the state, and the interest of the whole, are not to be trusted to the wisdom and vigor of *future administrations*, when a security is to be had more effectual, more constant, and much less expensive. They who can be moved by the apprehension of dangers so remote, as that of the future independence of our colonies (a point I shall hereafter consider), seem scarcely consistent with themselves, when they suppose we may rely on the wisdom and vigor of an administration for their safety. I should indeed think it less material whether Canada were ceded to us or not, if I had in view only the security of *possession* in our colonies. I entirely agree with the Remarker, that we are in North America, "a far greater continental as well as naval power," and that only cowardice or ignorance can subject our colonies there to a French conquest. But, for the same reason, I disagree with him widely upon another point.

3. *The Blood and Treasure spent in the American Wars, not spent in the Cause of the Colonies alone.*

I do not think that our "blood and treasure have been expended," as he intimates, "in the cause of the colonies," and that we are "making conquests

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for *them*"[1]; yet I believe this is too common an error. I do not say they are altogether unconcerned in the event. The inhabitants of them are, in common with the other subjects of Great Britain, anxious for the glory of her crown, the extent of her power and commerce, the welfare and future repose of the whole British people. They could not, therefore, but take a large share in the affronts offered to Britain; and have been animated with a truly British spirit to exert themselves beyond their strength, and against their evident interest. Yet so unfortunate have they been, that their virtue has made against them; for upon no better foundation than this have they been supposed the authors of a war carried on for their advantage only.

It is a great mistake to imagine that the American country in question between Great Britain and France is claimed as the property of any *individual or public body in America;* or that the possession of it by Great Britain is likely, in any lucrative view, to redound at all to the advantage of any person there. On the other hand, the bulk of the inhabitants of North America are land-owners, whose lands are inferior in value to those of Britain, only by the want of an equal number of people. It is true, the accession of the large territory claimed before the war began (especially if that be secured by the possession of Canada), will tend to the increase of the British subjects, faster than if they had been confined within the mountains; yet the increase within the mountains only, would evidently make the com-

[1] *Remarks*, p. 25.

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parative population equal to that of Great Britain, much sooner than it can be expected when our people are spread over a country six times as large. I think this is the only point of light in which this account is to be viewed, and is the only one in which any of the colonies are concerned.

No colony, no possessor of lands in any colony, therefore, wishes for conquests, or can be benefited by them, otherwise than as they may be a means of securing peace on their borders. No considerable advantage has resulted to the colonies by the conquests of this war, or can result from confirming them by the peace, but what they must enjoy in common with the rest of the British people; with this evident drawback from their share of these advantages, that they will necessarily lessen or at least prevent the increase of the value of what makes the principal part of their private property, their land. A people spread through the whole tract of country on this side the Mississippi, and secured by Canada in our hands, would probably for some centuries find employment in agriculture, and thereby free us at home effectually from our fears of American manufactures. Unprejudiced men well know, that all the penal and prohibitory laws that were ever thought on will not be sufficient to prevent manufactures in a country whose inhabitants surpass the number that can subsist by the husbandry of it. That this will be the case in America soon, if our people remain confined within the mountains, and almost as soon should it be unsafe for them to live beyond, though the country be ceded to us, no man acquainted with

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political and commercial history can doubt. Manufactures are founded in poverty. It is the multitude of poor without land in a country, and who must work for others at low wages or starve, that enables undertakers to carry on a manufacture, and afford it cheap enough to prevent the importation of the same kind from abroad, and to bear the expense of its own exportation.

But no man, who can have a piece of land of his own, sufficient by his labor to subsist his family in plenty, is poor enough to be a manufacturer, and work for a master. Hence, while there is land enough in America for our people, there can never be manufactures to any amount or value. It is a striking observation of a very able pen, that the natural livelihood of the thin inhabitants of a forest country is hunting; that of a greater number, pasturage; that of a middling population, agriculture; and that of the greatest, manufactures; which last must subsist the bulk of the people in a full country, or they must be subsisted by charity, or perish. The extended population, therefore, that is most advantageous to Great Britain, will be best effected, because only effectually secured, by the possession of Canada.

So far as the *being* of our present colonies in North America is concerned, I think indeed with the Remarker, that the French there are not "*an enemy to be apprehended*" [1]; but the expression is too vague to be applicable to the present, or indeed to any other case. Algiers, Tunis, and Tripoli, unequal as

[1] *Remarks*, p. 27.

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they are to this nation in power and numbers of people, are enemies to be still apprehended; and the Highlanders of Scotland have been so for many ages, by the greatest princes of Scotland and Britain. The wild Irish were able to give a great deal of disturbance even to Queen Elizabeth, and cost her more blood and treasure than her war with Spain. Canada, in the hands of France, has always stinted the growth of our colonies, in the course of this war, and indeed before it; has disturbed and vexed even the best and strongest of them; has found means to murder thousands of their people, and unsettle a great part of their country. Much more able will it be to starve the growth of an infant settlement. Canada has also found means to make this nation spend two or three millions a year in America; and a people, how small soever, that in their present situation can do this as often as we have a war with them, is, methinks, "an enemy to be apprehended."

Our North American colonies are to be considered as the *frontier of the British empire* on that side. The frontier of any dominion being attacked, it becomes not merely "the cause" of the people immediately attacked, the inhabitants of that frontier, but properly "the cause" of the whole body. Where the frontier people owe and pay obedience, there they have a right to look for protection. No political proposition is better established than this. It is therefore invidious to represent the "blood and treasure" spent in this war as spent in "the cause of the colonies" only; and that they are "absurd and ungrateful," if they think we have done nothing,

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unless we "make conquests for them," and reduce Canada to gratify their "vain ambition," &c. It will not be a conquest for *them*, nor gratify any vain ambition of theirs. It will be a conquest for the *whole;* and all our people will, in the increase of trade and the ease of taxes, find the advantage of it.

Should we be obliged at any time to make a war for the protection of our commerce, and to secure the exportation of our manufactures, would it be fair to represent such a war merely as blood and treasure spent in the cause of the weavers of Yorkshire, Norwich, or the West, the cuttlers of Sheffield, or the button-makers of Birmingham? I hope it will appear, before I end these sheets, that if ever there was a national war, this is truly such a one; a war in which the interest of the whole nation is directly and fundamentally concerned. Those who would be thought deeply skilled in human nature affect to discover self-interested views everywhere, at the bottom of the fairest, the most generous conduct. Suspicions and charges of this kind meet with ready reception and belief in the minds even of the multitude, and therefore less acuteness and address than the Remarker is possessed of would be sufficient to persuade the nation generally that all the zeal and spirit manifested and exerted by the colonies in this war was only in "their own cause," to "make conquest for themselves," to engage us to make more for them, to gratify their own "vain ambition."

But should they now humbly address the mother country in the terms and the sentiments of the Remarker; return her their grateful acknowledgments

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for the blood and treasure she had spent in "their cause"; confess that enough had now been done "for them"; allow that "English forts, raised in proper passes, will, with the wisdom and vigor of her administration," be a sufficient future protection; express their desires that their people may be confined within the mountains, lest, if they be suffered to spread and extend themselves in the fertile and pleasant country on the other side, they should "increase infinitely from all causes," "live wholly on their own labor," and become independent; beg, therefore, that the French may be suffered to remain in possession of Canada, as their neighbourhood may be useful to prevent our increase, and the removing them may "in its consequences be even dangerous"[1]; —I say, should such an address from the colonies make its appearance here (though, according to the Remarker, it would be a most just and reasonable one), would it not, might it not, with more justice be answered: "We understand you, Gentlemen, perfectly well; you have only your interest in view; you want to have the people confined within your present limits, that in a few years the lands you are possessed of may increase tenfold in value. You want to reduce the price of labor by increasing numbers on the same territory, that you may be able to set up manufactures and vie with your mother country. You would have your people kept in a body, that you may be more able to dispute the commands of the crown, and obtain an independency. You would have the French left in Canada

[1] *Remarks*, pp. 50, 51.

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to exercise your military virtue, and make you a warlike people, that you may have more confidence to embark in schemes of disobedience, and greater ability to support them. You have tasted, too, the sweets of TWO OR THREE MILLIONS sterling per annum spent among you by our fleets and forces, and you are unwilling to be without a pretence for kindling up another war, and thereby occasioning a repetition of the same delightful doses. But, Gentlemen, allow us to understand *our* interest a little likewise; we shall remove the French from Canada, that you may live in peace, and we be no more drained by your quarrels. You shall have land enough to cultivate, that you may have neither necessity nor inclination to go into manufactures, and we will manufacture for you, and govern you."

A reader of the *Remarks* may be apt to say: "If this writer would have us restore Canada on principles of moderation, how can we, consistent with those principles, retain Guadaloupe, which he represents of so much greater value?" I will endeavour to explain this; because, by doing it, I shall have an opportunity of showing the truth and good sense of the answer to the interested application I have just supposed. The author, then, is only apparently and not really inconsistent with himself. If we can obtain the credit of moderation by restoring Canada, it is well; but we should, however, restore it at *all events;* because it would not only be of no use to us, but "the possession of it (in his opinion) may in its consequences be dangerous." [1] As how? Why,

[1] *Remarks*, pp. 50, 51.

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plainly (at length it comes out), if the French are not left there to check the growth of our colonies, "they will extend themselves almost without bounds into inland parts, and increase infinitely from all causes; becoming a numerous, hardy, independent people; possessed of a strong country, communicating little or not at all with England, living wholly on their own labor, and in process of time knowing little and inquiring little about the mother country."

In short, according to this writer, our present colonies are large enough and numerous enough; and the French ought to be left in North America to prevent their increase, lest they become not only useless, but dangerous to Britain. I agree with the gentleman, that, with Canada in our possession, our people in America will increase amazingly. I know that their common rate of increase, where they are not molested by the enemy, is doubling their numbers every twenty-five years, by natural generation only; exclusive of the accession of foreigners.[1] I think this increase continuing would probably, in a century more, make the number of British subjects

[1] The reason of this greater increase in America than in Europe is, that in old settled countries, all trades, farms, offices, and employments are full; and many people refrain from marriage till they see an opening, in which they can settle themselves, with a reasonable prospect of maintaining a family; but in America, it being easy to obtain land, which, with moderate labor will afford subsistence and something to spare, people marry more readily and earlier in life, whence arise a numerous offspring and the swift population of those countries. It is a common error, that we cannot fill our provinces, or increase the number of them, without draining this nation of its people. The increase alone of our present colonies is sufficient for both those purposes.—F.

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on that side the water more numerous than they now are on this; but,—

4. Not necessary that the American Colonies should cease being useful to the Mother Country. Their Preference over the West India Colonies stated.

—I am far from entertaining, on that account, any fears of their becoming either useless or dangerous to us; and I look on those fears to be merely imaginary and without any probable foundation. The Remarker is reserved in giving his reasons; as, in his opinion, this "is not a fit subject for discussion." I shall give mine, because I conceive it a subject necessary to be discussed; and the rather, as those fears, how groundless and chimerical soever, may, by possessing the multitude, possibly induce the ablest ministry to conform to them against their own judgment; and thereby prevent the assuring to the British name and nation a stability and permanency, that no man acquainted with history durst have hoped for, till our American possessions opened the pleasing prospect.

The Remarker thinks that our people in America, "finding no check from Canada, would extend themselves almost without bounds into the inland parts, and increase infinitely from all causes." The very reason he assigns for their so extending, and which is indeed the true one (their being "invited to it by the pleasantness, fertility, and plenty of the country"), may satisfy us that this extension will continue to proceed as long as there remains any

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pleasant, fertile country within their reach. And if we even suppose them confined by the waters of the Mississippi westward, and by those of St. Lawrence and the Lakes to the northward, yet still we shall leave them room enough to increase, even in the matter of settling now practised there, till they amount to perhaps a hundred millions of souls. This must take some centuries to fulfil; and in the mean time this nation must necessarily supply them with the manufactures they consume; because the new settlers will be employed in agriculture; and the new settlements will so continually draw off the spare hands from the old, that our present colonies will not, during the period we have mentioned, find themselves in a condition to manufacture, even for their own inhabitants, to any considerable degree, much less for those who are settling behind them.

Thus our trade must, till that country becomes as fully peopled as England (that is, for centuries to come), be continually increasing, and with it our naval power; because the ocean is between us and them, and our ships and seamen must increase as that trade increases.

The human body and the political differ in this: that the first is limited by nature to a certain stature, which, when attained, it cannot ordinarily exceed; the other, by better government and more prudent policy, as well as by the change of manners, and other circumstances, often takes fresh starts of growth, after being long at a stand, and may add tenfold to the dimensions it had for ages been confined to. The mother, being of full stature, is in a

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few years equalled by a growing daughter; but in the case of a mother-country and her colonies, it is quite different. The growth of the children tends to increase the growth of the mother, and so the difference and superiority are longer preserved. Were the inhabitants of this island limited to their present number by any thing in nature, or by unchangeable circumstances, the equality of population between the two countries might indeed sooner come to pass; but sure experience, in those parts of the island where manufactures have been introduced, teaches us that people increase and multiply in proportion as the means and facility of gaining a livelihood increase; and that this island, if they could be employed, is capable of supporting ten times the present number of people.

In proportion, therefore, as the demand increases for the manufactures of Britain, by the increase of people in her colonies, the number of her people at home will increase; and with them the strength as well as the wealth of the nation. For satisfaction in this point, let the reader compare in his mind the number and force of our present fleets with our fleet in Queen Elizabeth's time,[1] before we had colonies. Let him compare the ancient with the present state of our towns on or near our western coast (Manchester, Liverpool, Kendal, Lancaster, Glasgow, and the countries round them) that trade with any manufactures for our colonies (not to mention Leeds, Halifax, Sheffield, and Birmingham), and consider what a difference there is in the numbers of people, build-

[1] Namely forty sail, none of more than forty guns.

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ings, rents, and the value of land and of the produce of land; even if he goes back no farther than is within man's memory. Let him compare those countries with others on the same island, where manufactures have not yet extended themselves; observe the present difference, and reflect how much greater our strength may be, if numbers give strength, when our manufactures shall occupy every part of the island where they can possibly be subsisted.

But, say the objectors, "there is a *certain distance from the sea*, in America, beyond which the expense of carriage will put a stop to the sale and consumption of your manufactures; and this, with the difficulty of making returns for them, will oblige the inhabitants to manufacture for themselves; of course, if you suffer your people to extend their settlements beyond that distance, your people become useless to you"; and this distance is limited by some to two hundred miles, by others to the Appalachian mountains.

Not to insist on a plain truth, that no part of a dominion from whence a government may on occasion draw supplies and aids both of men and money (though at too great a distance to be supplied with manufactures from some other part) is therefore to be deemed useless to the whole, I shall endeavour to show that these imaginary limits of utility, even in point of commerce, are much too narrow. The inland parts of the continent of Europe are farther from the sea than the limits of settlement proposed for America. Germany is full of tradesmen and artificers of all kinds, and the governments there,

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are not all of them always favorable to the commerce of Britain; yet it is a well-known fact, that our manufactures find their way even into the heart of Germany. Ask the great manufacturers and merchants of the Leeds, Sheffield, Birmingham, Manchester, and Norwich goods; and they will tell you that some of them send their riders frequently through France or Spain, and Italy, and up to Vienna, and back through the middle and northern parts of Germany, to show samples of their wares, and collect orders, which they receive by almost every mail to a vast amount. Whatever charges arise on the carriage of goods are added to the value, and all paid by the consumer.

If these nations, over whom we can have no government, over whose consumption we can have no influence but what arises from the cheapness and goodness of our wares, whose trade, manufactures, or commercial connexions are not subject to the control of our laws, as those of our colonies certainly are in some degree,—I say, if these nations purchase and consume such quantities of our goods, notwithstanding the remoteness of their situation from the sea, how much less likely is it that the settlers in America, who must for ages be employed in agriculture chiefly, should make cheaper for themselves the goods our manufacturers at present supply them with, even if we suppose the carriage five, six, or seven hundred miles from the sea as difficult and expensive as the like distance into Germany, whereas in the latter the natural distances are frequently doubled by political obstructions — I mean the

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intermixed territories and clashing interests of princes.[1]

But when we consider that the inland parts of America are penetrated by great navigable rivers, and there are a number of great lakes, communicating with each other, with those rivers, and with the sea, very small portages here and there excepted[2]; that the sea-coasts (if one may be allowed the expression) of those lakes only amount at least to two thousand seven hundred miles, exclusive of the rivers running into them, many of which are navigable to a great extent for boats and canoes, through vast tracts of country;—how little likely is it that the expense on the carriage of our goods into those countries should prevent the use of them. If the poor Indians in those remote parts are now able to pay for the linen, woollen, and iron wares they are at present furnished with by the French and English traders, though Indians have nothing but what they get by hunting, and the goods are loaded with all the impositions fraud and knavery can contrive to

[1] This was before the consolidation of Europe by the Bonapartes, and when, as Sir C. Whitworth asserts in his *State of Trade:* "Each state in Germany is jealous of its neighbours; and hence, rather than facilitate the export or transmit of its neighbour's products or manufactures, they have all recourse to strangers."

[2] From New York into Lake Ontario, the land-carriage of the several portages altogether amounts to but about twenty-seven miles. From Lake Ontario into Lake Erie, the land-carriage at Niagara is but about twelve miles. All the lakes above Niagara communicate by navigable straits, so that no land-carriage is necessary to go out of one into another. From Presqu' Isle on Lake Erie there are but fifteen miles land-carriage, and that a good wagon-road, to Beef River, a branch of the Ohio, which brings you into a navigation of many thousand miles inland, if you take together the Ohio, the Mississippi, and all the great rivers and branches that run into them.—F.

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enhance their value, will not industrious English farmers, hereafter settled in those countries, be much better able to pay for what shall be brought them in the way of fair commerce?

If it is asked, What can such farmers raise, wherewith to pay for the manufactures they may want from us? I answer, that the inland parts of America in question are well known to be fitted for the production of hemp, flax, potash, and, above all, silk; the southern parts may produce olive oil, raisins, currants, indigo, and cochineal; not to mention horses and black cattle, which may easily be driven to the maritime markets, and at the same time assist in conveying other commodities. That the commodities first mentioned may easily, by water and land carriage, be brought to the sea-ports from interior America, will not seem incredible, when we reflect that *hemp* formerly came from the Ukraine, the most southern parts of Russia, to Wologda, and down the Dwina to Archangel; and hence, by a perilous navigation, round the North Cape to England and other parts of Europe. It now comes from the same country up the Dnieper, and down the Duna, with much land-carriage. Great part of the Russian *iron*, no high-priced commodity, is brought three hundred miles by land and water from the heart of Siberia. *Furs* (the produce too of America) are brought to Amsterdam from all parts of Siberia, even the most remote—Kamtschatka. The same country furnishes me with another instance of extended inland commerce.

It is found worth while to keep up a mercantile

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communication between Pekin in China and Petersburg. And none of these instances of inland commerce exceed those of the courses by which, at several periods, *the whole of the trade of the East* was carried on. Before the prosperity of the Mameluke dominion in Egypt fixed the staple for the riches of the East at Cairo and Alexandria (whither they were brought from the Red Sea), great part of those commodities were carried to the cities of Cashgar and Balk. This gave birth to those towns, that still subsist upon the remains of their ancient opulence, amidst a people and country equally wild. From thence those goods were carried down the Amû (the ancient Oxus) to the Caspian Sea, and up the Wolga to Astrachan; from whence they were carried over to and down the Don, to the mouth of that river; and thence again the Venetians directly, and the Genoese and Venetians indirectly, by way of Kaffa and Trebisond, dispersed them through the Mediterranean and some other parts of Europe.

Another part of those goods was carried over land from the Wolga to the rivers Duna and Neva; from both they were carried to the city by Wisbuy in the Baltic (so eminent for its sea-laws); and from the city of Ladoga on the Neva, we are told, they were even carried by the Dwina to Archangel; and from thence round the North Cape. If iron and hemp will bear the charge of carriage from this inland country, other metals will, as well as iron; and certainly silk, since three pence per pound is not above one per cent. on the value, and amounts to twenty-eight pounds per ton. If the *growths* of a country

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find their way out of it, the *manufactures* of the country where they go will infallibly find their way into it.

They who understand the economy and principles of manufactures, know that it is impossible to establish them in places not populous; and, even in those that are populous, hardly possible to establish them to the prejudice of the places *already in possession of them*. Several attempts have been made in France and Spain, countenanced by government, to draw from us, and establish in those countries, our hardware and woollen manufactures, but without success.

The reasons are various. A manufacture is part of a great system of commerce, which takes in conveniences of various kinds: methods of providing materials of all sorts, machines for expediting and facilitating labor, all the channels of correspondence for vending the wares, the credit and confidence necessary to found and support this correspondence, the mutual aid of different artisans, and a thousand other particulars which time and long experience have gradually established. A part of such a system cannot support itself without the whole; and before the whole can be obtained the part perishes. Manufactures, where they are in perfection, are carried on by multiplicity of hands, each of which is expert only in his own part; no one of them a master of the whole; and, if by any means spirited away to a foreign country, he is lost without his fellows. Then it is a matter of the extremest difficulty to persuade a complete set of workmen, skilled in all parts of a manufactory, to leave their country to-

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gether, and settle in a foreign land. Some of the idle and drunken may be enticed away; but these only disappoint their employers, and serve to discourage the undertaking. If by royal munificence, and an expense that the profits of the trade alone would not bear, a complete set of good and skilful hands are collected and carried over, they find so much of the system imperfect, so many things wanting to carry on the trade to advantage, so many difficulties to overcome, and the knot of hands so easily broken by death, dissatisfaction, and desertion, that they and their employers are discouraged together, and the project vanishes into smoke.

Hence it happens that established manufactures are hardly ever lost, but by foreign conquest, or by some eminent interior fault in manners or government—a bad police oppressing and discouraging the workmen, or religious persecutions driving the sober and industrious out of the country. There is, in short, scarce a single instance in history of the contrary, where manufactures have once taken firm root. They sometimes start up in a new place; but are generally supported, like exotic plants, at more expense than they are worth for any thing but curiosity, until these new seats become the refuge of the manufacturers driven from the old ones.

The conquest of Constantinople, and final reduction of the Greek empire, dispersed many curious manufacturers into different parts of Christendom. The former conquests of its provinces had before done the same. The loss of liberty in Verona, Milan, Florence, Pisa, Pistoia, and other great cities of

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Italy, drove the manufacturers of woollen cloths into Spain and Flanders. The latter first lost their trade and manufactures to Antwerp and the cities of Brabant; from whence, by persecution for religion, they were sent into Holland and England; while the civil wars, during the minority of Charles the First of Spain, which ended in the loss of the liberty of their great towns, ended too in the loss of the manufactures of Toledo, Segovia, Salamanca, Medina del Compo, &c. The revocation of the *Edict of Nantz* communicated to all the Protestant part of Europe the paper, silk, and other valuable manufactures of France, almost peculiar at that time to that country, and till then in vain attempted elsewhere.

To be convinced, that it is not soil and climate, nor even freedom from taxes, that determines the residence of manufactures, we need only turn our eyes on Holland, where a multitude of manufactures are still carried on, perhaps more than on the same extent of territory anywhere in Europe, and sold on terms upon which they cannot be had in any other part of the world. And this too is true of those *growths* which by their nature and the labor required to raise them come the nearest to manufactures.

As to the commonplace objection to the North American settlements, that they are *in the same climate, and their produce the same, as that of England:* In the first place, it is not true; it is particularly not so of the countries now likely to be added to our settlements; and of our present colonies, the products—lumber, tobacco, rice, and indigo, great articles of commerce—do not interfere with the products

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of England. In the next place, a man must know very little of the trade of the world, who does not know that the greater part of it is carried on between countries whose climates differ very little. Even the trade between the different parts of these British Islands is greatly superior to that between England and all the West India Islands put together.

If I have been successful in proving that a considerable commerce may and will subsist between us and our future most inland settlements in North America, notwithstanding their distance, I have more than half proved that no *other inconveniency will arise* from their distance. Many men in such a country must "know," must "think," and must "care" about the country they chiefly trade with. The juridical and other connexions of government are yet a faster hold than even commercial ties, and spread, directly and indirectly, far and wide. Business to be solicited and causes depending create a great intercourse, even where private property is not divided in different countries; yet this division will always subsist where different countries are ruled by the same government. Where a man has landed property both in the mother country and the province, he will almost always live in the mother country. This, though there were no trade, is singly a sufficient gain. It is said that Ireland pays near a million sterling annually to its absentees in England. The balance of trade from Spain, or even Portugal, is scarcely equal to this.

Let it not be said we have *no absentees* from North America. There are many, to the writer's know-

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ledge; and if there are at present but few of them that distinguish themselves here by great expense, it is owing to the mediocrity of fortune among the inhabitants of the northern colonies, and a more equal division of landed property than in the West India Islands, so that there are as yet but few large estates. But if those who have such estates reside upon and take care of them themselves, are they worse subjects than they would be if they lived idly in England?

Great merit is assumed for the gentlemen of the West Indies,[1] on the score of their residing and spending their money in England. I would not depreciate that merit,—it is considerable; for they might, if they pleased, spend their money in France; but the difference between their spending it here and at home is not so great. What do they spend it in when they are here, but the produce and manufactures of this country? and would they not do the same if they were at home? Is it of any great importance to the English farmer, whether the West India gentleman comes to London and eats his beef, pork, and tongues, fresh, or has them brought to him in the West Indies, salted? Whether he eats his English cheese and butter, or drinks his English ale, at London or in Barbadoes? Is the clothier's, or the mercer's, or the cutler's, or the toyman's profit less, for their goods being worn and consumed by the same persons residing on the other side of the ocean? Would not the profits of the merchant and mariner be rather greater, and some addition made to our navigation, ships, and seamen? If the North Ameri-

[1] *Remarks*, pp. 47, 48, &c.

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can gentleman stays in his own country, and lives there in that degree of luxury and expense, with regard to the use of British manufactures, that his fortune enables him to do, may not his example, from the imitation of superiors so natural to mankind spread the use of those manufactures among hundreds of families around him, and occasion a much greater demand for them than it would do if he should remove and live in London?

However this may be, if, in our views of immediate advantage, it seems preferable that the gentlemen of large fortunes in North America should reside much in England, it is what may surely be expected as fast as such fortunes are acquired there. Their having "colleges of their own for the education of their youth," will not prevent it. A little knowledge and learning acquired increases the appetite for more, and will make the conversation of the learned on this side the water more strongly desired. Ireland has its university likewise; yet this does not prevent the immense pecuniary benefit we receive from that kingdom. And there will always be, in the conveniences of life, the politeness, the pleasures, the magnificence of the reigning country, many other attractions besides those of learning, to draw men of substance there, where they can, apparently at least, have the best bargain of happiness for their money.

Our trade to the West India Islands is undoubtedly a valuable one; but whatever is the amount of it, it has long been at a stand. Limited as our sugar planters are by the scantiness of territory, they cannot increase much beyond their present number;

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and this is an evil, as I shall show hereafter, that will be little helped by our keeping Guadaloupe.

The trade to our northern colonies is not only greater, but yearly increasing with the increase of the people; and even in a greater proportion, as the people increase in wealth and the ability of spending, as well as in numbers.[1] I have already said,

[1] The writer has obtained accounts of the exports to North America and the West India Islands, by which it appears that there has been some increase of trade to those Islands, as well as to North America, though in a much less degree. The following extract from these accounts will show the reader, at one view, the amount of the exports to each, in two different terms of five years; the terms taken at ten years' distance from each other, to show the increase, viz.:

First term, from 1744 to 1748, inclusive.

	Northern Colonies.			West India Islands.		
1744	£640,114	12	4	£796,112	17	9
1745	534,316	2	5	503,669	19	9
1746	754,945	4	3	472,994	16	7
1747	726,648	5	5	856,463	18	6
1748	830,243	16	9	734,095	15	3
Total,	£3,486,268	1	2	3,363,337	10	10
			Difference,	122,930	10	4
				£3,486,268	1	2

Second term, from 1754 to 1758, inclusive.

	Northern Colonies.			West India Islands.		
1754	£1,246,615	1	11	£685,675	3	0
1755	1,177,848	6	10	694,667	13	3
1756	1,428,720	18	10	733,458	16	3
1757	1,727,924	2	10	776,488	0	6
1758	1,832,948	13	10	877,571	19	11
Total,	£7,414,057	4	3	3,767,841	12	11
			Difference,	3,646,215	11	4
				£7,414,057	4	3

In the first term, total of West India Islands,	£3,363,337	10	10
In the second term, ditto	3,767,841	12	11
Increase, only	£404,504	2	1
In the first term, total for the northern colonies,	3,486,268	1	2
In the second term, ditto	7,414,057	4	3
Increase,	£3,927,789	3	1

By these accounts it appears that the exports to the West India Islands, and to the northern colonies, were in the first term nearly

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that our people in the northern colonies double in about twenty-five years, exclusive of the accession of strangers. That I speak within bounds, I appeal to the authentic accounts frequently required by the Board of Trade, and transmitted to that Board by the respective governors; of which accounts I shall select one as a sample, being that from the colony of Rhode Island [1]; a colony that of all the others receives the least addition from strangers. For the

equal (the difference being only £122,930 10*s.* 4*d.*), and in the second term, the exports to those islands had only increased £404,504 2*s.* 1*d.* Whereas the increase to the northern colonies is £3,927,789 3*s.* 1*d.*, almost *four millions*.

Some part of this increased demand for English goods may be ascribed to the armies and fleets we have had both in North America and the West Indies; and so much for what is consumed by the soldiery; their clothing, stores, ammunition, &c., sent from hence on account of the government, being (as is supposed) not included in these accounts of merchandise exported; but, as the war has occasioned a great plenty of money in America, many of the inhabitants have increased their expense.

N. B.—These accounts do not include any exports from Scotland to America, which are doubtless proportionably considerable; nor the exports from Ireland.—F.

Certain discrepancies in the above figures are hereby given as originally printed.—EDITOR.

[1] *Copy of the Report of Governor Hopkins to the Board of Trade, on the Numbers of People in Rhode Island.*

In obedience to your Lordship's commands, I have caused the within account to be taken by officers under oath. By it there appears to be in this colony at this time 35,939 white persons, and 4,697 blacks, chiefly negroes.

In the year 1730, by order of the then Lords Commissioners of Trade and Plantations, an account was taken of the number of people in this colony, and then there appeared to be 15,302 white persons, and 2,633 blacks.

Again in the year 1748, by like order, an account was taken of the number of people in this colony, by which it appears that there were at that time 29,755 white persons and 4,373 blacks.

STEPHEN HOPKINS.

COLONY OF RHODE ISLAND, Dec. 24, 1755.

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increase of our trade to those colonies, I refer to the accounts frequently laid before Parliament by the officers of the customs, and to the custom-house books; from which I have also selected one account, that of the trade from England, exclusive of Scotland, to Pennsylvania [1]; a colony most remarkable for the plain, frugal manner of living of its inhabitants, and the most suspected of carrying on manufactures, on account of the number of German artisans who are known to have transplanted themselves into that country; though even these, in truth, when they come there, generally apply themselves to agriculture, as the surest support and most advantageous employment.

By this account it appears, that the exports to that province have, in twenty-eight years, increased nearly in the proportion of seventeen to one; whereas the people themselves, who by other authentic accounts appear to double their numbers (the strangers who settle there included) in about sixteen years,

[1] *An Account of the Value of the Exports from England to Pennsylvania in one Year, taken at different Periods, viz.*

In 1723 they amounted only to	£15,992	19	4
1730 they were	48,592	7	5
1737	56,690	6	7
1742	75,295	3	4
1747	82,404	17	7
1752	201,666	19	11
1757	268,426	6	6

N. B.—The accounts for 1758 and 1759 were not then completed; but those acquainted with the North American trade know that the increase in those two years had been in a still greater proportion, the last year being supposed to exceed any former year by a third; and this owing to the increased ability of the people to spend, from the greater quantities of money circulating among them by the war.

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cannot in the twenty-eight years have increased in a greater proportion than as four to one. The additional demand, then, and consumption of goods from England, of thirteen parts in seventeen, more than the additional number would require, must be owing to this: that the people, having by their industry mended their circumstances, are enabled to indulge themselves in finer clothes, better furniture, and a more general use of all our manufactures than heretofore.

In fact, the occasion for English goods in North America, and the inclination to have and use them, is, and must be for ages to come, much greater than the ability of the people to pay for them; they must therefore, as they now do, deny themselves many things they would otherwise choose to have, or increase their industry to obtain them. And thus, if they should at any time manufacture some coarse article, which, on account of its bulk or some other circumstance, cannot so well be brought to them from Britain, it only enables them the better to pay for finer goods, that otherwise they could not indulge themselves in; so that the exports thither are not diminished by such manufacture, but rather increased. The single article of manufacture in these colonies, mentioned by the Remarker, is *hats* made in New England. It is true, there have been, ever since the first settlement of that country, a few hatters there, drawn thither probably at first by the facility of getting beaver, while the woods were but little cleared, and there was plenty of those animals. The case is greatly altered now. The beaver skins

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are not now to be had in New England, but from very remote places and at great prices. The trade is accordingly declining there; so that, far from being able to make hats in any quantity for exportation, they cannot supply their own home demand; and it is well known that some thousand dozens are sent thither yearly from London, Bristol, and Liverpool, and sold cheaper than the inhabitants can make them of equal goodness.

In fact, the colonies are so little suited for establishing of manufacture, that they are continually losing the few branches they accidentally gain. The working braziers, cutlers, and pewterers, as well as hatters, who have happened to go over from time to time and settle in the colonies, gradually drop the working part of their business, and import their respective goods from England, whence they can have them cheaper and better than they can make them. They continue their shops indeed, in the same way of dealing; but become *sellers* of braziery, cutlery, pewter, hats, &c., brought from England, instead of being *makers* of those goods.

5. *The American Colonies not dangerous in their Nature to Great Britain.*

Thus much as to the apprehension of our colonies becoming useless to us. I shall next consider the other supposition, that their growth may render them *dangerous*. Of this, I own, I have not the least conception, when I consider that we have already *fourteen separate governments* on the maritime coast

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of the continent; and, if we extend our settlements, shall probably have as many more behind them on the inland side. Those we now have are not only under different governors, but have different forms of government, different laws, different interests, and some of them different religious persuasions and different manners.

Their jealousy of each other is so great, that however necessary a union of the colonies has long been, for their common defence and security against their enemies, and how sensible soever each colony has been of that necessity, yet they have never been able to effect such a union among themselves, nor even to agree in requesting the mother country to establish it for them. Nothing but the immediate command of the crown has been able to produce even the imperfect union, but lately seen there, of the forces of some colonies. If they could not agree to unite for their defence against the French and Indians, who were perpetually harassing their settlements, burning their villages, and murdering their people, can it reasonably be supposed there is any danger of their uniting against their own nation, which protects and encourages them, with which they have so many connexions and ties of blood, interest, and affection, and which, it is well known, they all love much more than they love one another?

In short, there are so many causes that must operate to prevent it, that I will venture to say a union amongst them for such a purpose is not merely improbable, it is impossible. And if the union of

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the whole is impossible, the attempt of a part must be madness, as those colonies that did not join the rebellion would join the mother country in suppressing it. When I say such a union is impossible, I mean without the most grievous tyranny and oppression. People who have property in a country which they may lose, and privileges which they may endanger, are generally disposed to be quiet, and even to bear much, rather than hazard all. While the government is mild and just, while important civil and religious rights are secure, such subjects will be dutiful and obedient. *The waves do not rise but when the winds blow.*

What such an administration as the Duke of Alva's in the Netherlands might produce, I know not; but this, I think, I have a right to deem impossible. And yet there were two very manifest differences between that case and ours; and both are in our favor. The first, that Spain had already united the seventeen provinces under one visible government, though the States continued independent; the second, that the inhabitants of those provinces were of a nation, not only different from, but utterly unlike the Spaniards. Had the Netherlands been peopled from Spain, the worst of oppression had probably not provoked them to wish a separation of government. It might, and probably would, have ruined the country; but never would have produced an independent sovereignty. In fact, neither the very worst of governments, the worst of politics in the last century, nor the total abolition of their remaining liberty, in the provinces of Spain itself, in

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the present, have produced any independency in Spain that could be supported. The same may be observed of France.

And let it not be said that the neighbourhood of these to the seat of government has prevented a separation. While our strength at sea continues, the banks of the Ohio, in point of easy and expeditious conveyance of troops, are nearer to London than the remote parts of France and Spain to their respective capitals, and much nearer than Connaught and Ulster were in the days of Queen Elizabeth. Nobody foretells the dissolution of the Russian monarchy from its extent; yet I will venture to say the eastern parts of it are already much more inaccessible from Petersburg than the country on the Mississippi is from London,—I mean, more men, in less time, might be conveyed to the latter than the former distance. The rivers Oby, Jenessa, and Lena do not facilitate the communication half so well by their course, nor are they half so practicable as the American rivers. To this I shall only add the observation of Machiavel, in his *Prince:* that a government seldom long preserves its dominion over those who are foreigners to it; who, on the other hand, fall with great ease, and continue inseparably annexed to the government of their own nation; which he proves by the fate of the English conquests in France. Yet with all these disadvantages, so difficult is it to overturn an established government, that it was not without the assistance of France and England that the United Provinces supported themselves; which teaches us that—

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6. *The French remaining in Canada, an Encouragement to Disaffections in the British Colonies. If they prove a Check, that Check of the most barbarous Nature—*

if the visionary danger of independence in our colonies is to be feared, nothing is more likely to render it substantial than the neighbourhood of foreigners at enmity with the sovereign governments, capable of giving either aid,[1] or an asylum, as the event shall require. Yet against even these disadvantages, did Spain preserve almost ten provinces merely through their want of union; which, indeed, could never have taken place among the others, but

[1] The *aid* Dr. Franklin alludes to must probably have consisted in early and full supplies of arms, officers, intelligence, and trade of export and of import, through the river St. Lawrence, on risks both public and private; in the encouragement of splendid promises and a great ally; in the passage from Canada to the back settlements being *shut* to the British forces; in the quiet of the great body of Indians; in the support of emissaries and discontented citizens; in loans and subsidies to Congress, in ways profitable to France; in a refuge to be granted them in case of defeat, in vacant lands, as settlers; in the probability of war commencing earlier between England and France, at the Gulf of St. Lawrence (when the shipping taken were rightfully addressed to Frenchmen) than in the present case. All this might have happened as soon as America's distaste of England had exceeded the fear of the foreign nation; a circumstance frequently seen possible in history, and which the British ministers took care should not be wanting.

This explanation would have been superfluous, had not the opinion been very general in England, that *had not the French been removed from Canada, the revolt of America never would have taken place.* Why, then, were the French *not left* in Canada at the peace of 1763? Or, since they were not left there, why was the American dispute begun? Yet, in one sense, perhaps this opinion is true; for *had* the French been left in Canada, the English ministers would not only have sooner felt, but sooner have seen, the strange fatality of their plans.—B. V.

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for causes, some of which are in our case impossible, and others it is impious to suppose possible.

The Romans well understood that policy, which teaches the security arising to the chief government from separate States among the governed, when they restored the liberties of the States of Greece (oppressed but united under Macedon) by an edict that every State should live under its own laws.[1] They did not even name a governor. Independence of each other and separate interests (though among a people united by common manners, language, and I may say religion; inferior neither in wisdom, bravery, nor their love of liberty to the Romans themselves) were all the security the sovereigns wished for their sovereignty.

It is true, they did not call themselves sovereigns; they set no value on the title; they were contented with possessing the thing. And possess it they did, even without a standing army. What can be a stronger proof of the security of their possession? And yet, by a policy similar to this throughout, was the Roman world subdued and held, a world composed of above a hundred languages and sets of manners, different from those of their masters.[2] Yet

[1] "Omnes Græcorum civitates, quæ in Europâ, quæque in Asiâ essent, libertatem ac suas leges haberent," etc.—Liv., lib. xxxiii., cap. 30.

[2] When the Romans had subdued Macedon and Illyricum, they were both formed into republics by a decree of the Senate, and Macedon was thought safe from the danger of a revolution, by being divided into a division common among the Romans, as we learn from the tetrarchs in Scripture. "Omnium primum liberos esse placebat Macedonas atque Illyrios; ut omnibus gentibus appareret, arma populi Romani non liberis servitutem, sed contra servientibus libertatem afferre; ut

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this dominion was unshakable, till the loss of liberty and corruption of manners in the sovereign State overturned it.

But what is the prudent policy inculcated by the Remarker to obtain this end—security of dominion over our colonies? It is, to leave the French in Canada to "check" their growth; for otherwise, our people may "increase infinitely from all causes."[1] We have already seen in what manner the French and their Indians check the growth of our colonies. It is a modest word, this *check*, for massacring men, women, and children! The writer would, if he could, hide from himself, as well as from the public, the horror arising from such a proposal, by couching it in general terms. It is no wonder he thought it a "subject not fit for discussion" in his letter, though he recommends it as "a point that should be the constant object of the minister's attention!"

But if Canada is restored on this principle, will not Britain be guilty of all the blood to be shed, all the murders to be committed, in order to check this dreaded growth of our own people? Will not this be telling the French in plain terms, that the horrid

et in libertate gentes quæ essent, tutam eam sibi perpetuamque sub tutelâ populi Romani esse; et, quæ sub regibus viverent, et in presens tempus mitiores eos justioresque respectu populi Romani habere se, et, si quando bellum cum populo Romano regibus fuisset suis, exitum ejus victoriam Romanis, sibi libertatem, allaturum crederent. . . . . In quatuor regiones describi Macedoniam, ut suum quæque concilium haberet, placuit; et dimidium tributi, quàm quod regibus ferre soliti erant, populo Romano pendere. Similia his et in Illyricum mandata." —Liv., lib. xlv., cap. 18.

[1] *Remarks*, pp. 50, 51.

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barbarities they perpetrate with Indians on our colonists are agreeable to us; and that they need not apprehend the resentment of a government with whose views they so happily concur? Will not the colonies view it in this light? Will they have reason to consider themselves any longer as subjects and children, when they find their cruel enemies hallooed upon them by the country from whence they sprung; the government that owes them protection, as it requires their obedience? Is not this the most likely means of driving them into the arms of the French, who can invite them by an offer of security their own government chooses not to afford them? I would not be thought to insinuate that the Remarker wants humanity. I know how little many good-natured persons are affected by the distresses of people at a distance, and whom they do not know. There are even those who, being present, can sympathize sincerely with the grief of a lady on the sudden death of a favorite bird, and yet can read of the sinking of a city in Syria with very little concern.

If it be, after all, thought necessary to check the growth of our colonies, give me leave to propose a method less cruel. It is a method of which we have an example in Scripture. The murder of husbands, of wives, of brothers, sisters, and children, whose pleasing society has been for some time enjoyed, affects deeply the respective surviving relations; but grief for the death of a child just born is short and easily supported. The method I mean is that which was dictated by the Egyptian policy, when the "infinite increase" of the children of Israel was

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apprehended as dangerous to the State.[1] Let an act of Parliament then be made, enjoining the colony midwives to stifle in the birth every third or fourth child. By this means you may keep the colonies to their present size. And if they were under the hard alternative of submitting to one or the other of these schemes for checking their growth, I dare answer for them, they would prefer the latter.

But all the debate about the propriety or impropriety of keeping or restoring Canada is possibly too early. We have taken the capital indeed, but the country is yet far from being in our possession; and perhaps never will be; for, if our ministers are persuaded by such counsellors as the Remarker, that the French there are "not the worst of neighbours," and that, if we had conquered Canada, we ought, for our own sakes, to restore it, as a check to the growth of our colonies, I am then afraid we shall never take it. For there are many ways of avoiding the completion of the conquest, that will be less exceptionable and less odious than the giving it up.

7. *Canada easily peopled without draining Great Britain of any of its Inhabitants.*

The objection I have often heard, that, if we had Canada, we could not people it without draining Britain of its inhabitants, is founded on ignorance

[1] "And Pharaoh said unto his people: Behold, the people of the children of Israel are more and mightier than we. Come on, let us deal wisely with them, lest they multiply, and it come to pass, that, when there falleth out any war, they join also unto our enemies and fight against us, and so get them up out of the land. And the king spake to the Hebrew midwives," etc.—Exodus, ch. i.

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of the nature of population in new countries. When we first began to colonize in America, it was necessary to send people, and to send seed-corn; but it is not now necessary that we should furnish, for a new colony, either the one or the other. The annual increment alone of our present colonies, without diminishing their numbers, or requiring a man from hence, is sufficient in ten years to fill Canada with double the number of English that it now has of French inhabitants.[1] Those who are Protestants among the French will probably choose to remain under the English government; many will choose to remove, if they can be allowed to sell their lands, improvements, and effects; the rest in that thin-settled country will in less than half a century, from the crowds of English settling round and among them, be blended and incorporated with our people both in language and manners.

8. *The Merits of Guadaloupe to Great Britain overvalued, yet likely to be paid much dearer for, than Canada.*

In Guadaloupe the case is somewhat different; and though I am far from thinking[2] we have sugar-land enough,[3] I cannot think Guadaloupe is so desirable

[1] In fact, there have not gone from Britain itself to our colonies, these twenty years past, to settle there, so many as ten families a year; the new settlers are either the offspring of the old, or emigrants from Germany or the north of Ireland.

[2] *Remarks*, pp. 30, 34.

[3] It is often said, we have plenty of sugar-land still unemployed in Jamaica; but those who are well acquainted with that island know that the remaining vacant land in it is generally situated among mountains, rocks, and gullies, that make carriage impracticable, so that no

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an increase of it, as other objects the enemy would probably be infinitely more ready to part with. A country, fully inhabited by any nation, is no proper possession for another of different languages, manners, and religion. It is hardly ever tenable at less expense than it is worth. But the isle of Cayenne, and its appendix, Equinoctial France, having but very few inhabitants, and these therefore easily removed, would indeed be an acquisition every way suitable to our situation and desires. This would hold all that migrate from Barbadoes, the Leeward Islands, or Jamaica. It would certainly recall into an English government, in which there would be room for millions, all who have before settled or purchased in Martinico, Guadaloupe, Santa Cruz, or St. John's; except such as know not the value of an English government, and such I am sure are not worth recalling.

But should we keep Guadaloupe, we are told it would enable us to export £300,000 in sugars. Admit it to be true, though perhaps the amazing increase of English consumption might stop most of it here, to whose profit is this to redound? To the profit of the French inhabitants of the island; except a small part, that should fall to the share of the English purchasers, but whose whole purchase-money must first be added to the wealth and circulation of France. I grant, however, much of this £300,000 would be

profitable use can be made of it; unless the price of sugars should so greatly increase, as to enable the planter to make very expensive roads, by blowing up rocks, erecting bridges, &c., every two or three hundred yards.

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expended in British manufactures. Perhaps, too, a few of the land-owners of Guadaloupe might dwell and spend their fortunes in Britain, though probably much fewer than of the inhabitants of North America. I admit the advantage arising to us from these circumstances, as far as they go, in the case of Guadaloupe, as well as in that of our other West India settlements. Yet even this consumption is little better than that of an allied nation would be, who should take our manufactures and supply us with sugar, and put us to no great expense in defending the place of growth.

But, though our own colonies expend among us almost the whole produce of our sugar,[1] can we, or ought we to promise ourselves this will be the case of Guadaloupe? One £100,000 will supply them with British manufactures; and supposing we can effectually prevent the introduction of those of France, which is morally impossible in a country used to them, the other £200,000 will still be spent in France, in the education of their children and support of themselves; or else be laid up there, where they will always think their home to be.

Besides this consumption of British manufactures, much is said of the benfit we shall have from the situation of Guadaloupe; and we are told of a trade to the Caraccas and Spanish Main. In what respect Guadaloupe is better situated for this trade than Jamaica, or even our other islands, I am at a loss to guess. I believe it to be not so well situated for that of the Windward coast, as Tobago and St.

[1] *Remarks*, p. 47.

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Lucia; which in this, as well as other respects, would be more valuable possessions, and which, I doubt not, the peace will secure to us. Nor is it nearly so well situated for that of the rest of the Spanish Main as Jamaica. As to the greater safety of our trade by the possession of Guadaloupe, experience has convinced us that in reducing a single island, or even more, we stop the privateering business but little. Privateers still subsist, in equal if not greater numbers, and carry the vessels into Martinico which before it was more convenient to carry into Guadaloupe. Had we all the Caribbees, it is true, they would in those parts be without shelter.

Yet, upon the whole, I suppose it to be a doubtful point, and well worth consideration, whether our obtaining possession of all the Caribbees would be more than a temporary benefit; as it would necessarily soon fill the French part of Hispaniola with French inhabitants, and thereby render it five times more valuable in time of peace, and little less than impregnable in time of war, and would probably end in a few years in the uniting the whole of that great and fertile island under a French government. It is agreed on all hands, that our conquest of St. Christopher's, and driving the French from thence, first furnished Hispaniola with skilful and substantial planters, and was consequently the first occasion of its present opulence. On the other hand, I will hazard an opinion, that, valuable as the French possessions in the West Indies are, and undeniable as the advantages they derive from them, there is somewhat to be weighed in the opposite scale. They

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cannot at present make war with England, without exposing those advantages, while divided among the numerous islands they now have, much more than they would were they possessed of St. Domingo only; their own share of which would, if well cultivated, grow more sugar than is now grown in all their West India Islands.

I have before said I do not deny the utility of the conquest, or even of our future possession, of Guadaloupe, if not bought too dear. The trade of the West Indies is one of our most valuable trades. Our possessions there deserve our greatest care and attention. So do those of North America. I shall not enter into the invidious task of comparing their due estimation. It would be a very long and a very disagreeable one, to run through every thing material on this head. It is enough to our present point, if I have shown that the value of North America is capable of an immense increase, by an acquisition and measures that must necessarily have an effect the direct contrary of what we have been industriously taught to fear; and that Guadaloupe is, in point of advantage, but a very small addition to our West India possessions; rendered many ways less valuable to us than it is to the French, who will probably set more value upon it than upon a country [Canada] that is much more valuable to us than to them.

There is a great deal more to be said on all the parts of these subjects; but as it would carry me into a detail that I fear would tire the patience of my readers, and which I am not without apprehensions

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I have done already, I shall reserve what remains till I dare venture again on the indulgence of the public.[1]

CXCI

TO LORD KAMES

COVENTRY, 27 September, 1760.

MY DEAR LORD:—We are here upon a journey, which when first proposed was to have extended farther than the season will now permit. We designed going over to Ireland, and, having made the tour of that country, we were to have crossed from its northern part to Dumfries, or some other port on your coast, which would have given us the pleasing opportunity of seeing once more our friends in Scotland. This, if we could have left London early in the summer; but the litigation between our province and its Proprietor, in which we were engaged, confined us in London till the middle of this month. That cause is indeed at length ended, and in a great degree to our satisfaction; but, by its continuing so long, we are disappointed in our hopes of spending some more happy days at Kames with you and your amiable family.

I do not pretend to charge this to your account as a letter. It is rather to acknowledge myself in your debt, and to promise payment. It is some time

[1] Dr. Franklin is reported to have said that in writing this pamphlet he received considerable assistance from a learned friend, who, it is stated, on the authority of William T. Franklin, was Richard Jackson.

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since I received your obliging favor of June last. When I return to London, which we intend after seeing Cheshire, Wales, Bristol, and spending some time at Bath, I hope to be a more punctual correspondent. I am your Lordship's most obedient and humble servant,

B. FRANKLIN.

P. S.—Our thanks to Lady Kames for the receipt. Enclosed we send the *Chapter*.[1]

CXCII

TO DAVID HUME

COVENTRY, 27 September, 1760.

DEAR SIR:—I have too long postponed answering your obliging letter, a fault I will not attempt to excuse, but rather rely on your goodness to forgive it, if I am more punctual for the future.

I am obliged to you for the favorable sentiments you express of the pieces sent to you; though the volume relating to our Pennsylvania affairs was not written by me, nor any part of it, except the remarks on the Proprietor's estimate of his estate, and some of the inserted messages and reports of the Assembly, which I wrote when at home, as a member of committees appointed by the House for that service. The rest was by another hand.[2]

[1] This "Chapter" was the *Parable against Persecution*, first published by Lord Kames.

[2] The treatise here mentioned is probably the *Historical Review of the Constitution and Government of Pennsylvania*, which has hitherto

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But though I am satisfied, by what you say, that the Duke of Bedford was hearty in the scheme of the expedition, I am not so clear that others in the administration were equally in earnest in that matter. It is certain, that after the Duke of Newcastle's first orders to raise troops in the colonies, and promise to send over commissions to the officers, with arms and clothing for the men, we never had another syllable from him for eighteen months; during all which time the army lay idle at Albany for want of orders and necessaries; and it began to be thought at last that, if an expedition had ever been intended, the first design and the orders given must, through the multiplicity of business here at home, have been quite forgotten.[1]

I am not a little pleased to hear of your change of sentiments in some particulars relating to America; because I think it of importance to our general welfare, that the people of this nation should have right notions of us, and I know no one that has it more in his power to rectify their notions than Mr. Hume. I have lately read with great pleasure, as I do every thing of yours, the excellent Essay on the *Jealousy of Commerce*. I think it cannot but have a good effect in promoting a certain interest, too little thought of by selfish man, and scarcely ever mentioned, so that we hardly have a name for it; I mean the *interest of humanity*, or common good of

been published in the various editions of Franklin's works as from his pen. This letter to Hume removes all doubt that it was from another hand, though there is no doubt that Franklin encouraged and contributed to the expense of its publication.—EDITOR.

[1] This was the expedition projected against Canada in the year 1746.

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mankind. But, I hope, particularly from that Essay, an abatement of the jealousy, that reigns here, of the commerce of the colonies, at least so far as such abatement may be reasonable.

I thank you for your friendly admonition relating to some unusual words in the pamphlet. It will be of service to me. The "*pejorate*," and the "*colonize*," since they are not in common use here, I give up as bad; for certainly in writings intended for persuasion and for general information, one cannot be too clear; and every expression in the least obscure is a fault. The "*unshakeable*" too, though clear, I give up as rather low. The introducing new words, where we are already possessed of old ones sufficiently expressive, I confess must be generally wrong, as it tends to change the language; yet, at the same time, I cannot but wish the usage of our tongue permitted making new words, when we want them, by composition of old ones whose meanings are already well understood. The German allows of it, and it is a common practice with their writers. Many of our present English words were originally so made; and many of the Latin words. In point of clearness, such compound words would have the advantage of any we can borrow from the ancient or from foreign languages. For instance, the word *inaccessible*, though long in use among us, is not yet, I dare say, so universally understood by our people, as the word *uncomeatable* would immediately be, which we are not allowed to write. But I hope, with you, that we shall always in America make the best English of this Island our standard, and I believe it will be so.

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I assure you it often gives me pleasure to reflect how greatly the *audience* (if I may so term it) of a good English writer will, in another century or two, be increased by the increase of English people in our colonies.

My son presents his respects with mine to you and Dr. Monro. We received your printed circular letter to the members of the Society,[1] and purpose some time next winter to send each of us a little philosophical essay. With the greatest esteem, I am, dear Sir, your most obedient and most humble servant, B. FRANKLIN.

CXCIII

TO JOHN BASKERVILLE[2]

CRAVEN STREET, LONDON, 1760.

DEAR SIR:—Let me give you a pleasant instance of the prejudice some have entertained against your work. Soon after I returned, discoursing with a gentleman concerning the artists of Birmingham, he said you would be a means of blinding all the readers

[1] A Philosophical Society lately established at Edinburgh.

[2] John Baskerville, a celebrated English printer, was born in the year 1706. He inherited a small estate, and occupied himself for several years in teaching a school at Birmingham. Possessing a taste for painting, he entered into a lucrative branch of japanning, in which business he continued for life, and acquired by it a fortune, which made him independent. In the year 1750, he turned his thoughts towards an improvement in type-founding and printing. Several years were spent before he could produce such types as pleased him, and he expended six hundred pounds in the process. The profits of the undertaking, however, were not in proportion to the enterprise and expense attending it; as will be seen by the following extract from

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in the nation; for the strokes of your letters, being too thin and narrow, hurt the eye, and he could never read a line of them without pain. "I thought," said I, "you were going to complain of the gloss of the paper, some object to." "No, no," says he, "I have heard that mentioned, but it is not that; it is in the form and cut of the letters themselves; they have not that height and thickness of the stroke, which make the common printing so much the more comfortable to the eye." You see this gentleman was a *connoisseur*. In vain I endeavoured to

a letter which he wrote to Dr. Franklin, dated Birmingham, September 7, 1767. Dr. Franklin was at that time on a visit to Paris.

"After having obtained the reputation of excelling in the most useful art known to mankind, of which I have your testimony, is it not to the last degree provoking, that I cannot get even bread by it? I must starve, had I no other dependence. I have offered the London booksellers to print for them within five per cent as low as their common currency, but cannot get from them a single job. I offered my whole apparatus of letter-founding, printing, etc., to the Court of France by the Duke de Nivernois, when he was ambassador here, for eight thousand pounds, which was politely refused as being too large a sum. Mr. Godfroy, who may be heard of at Mr. Sayde's, optician to the King, lately told our good friend, Mr. Boulton, that France wished to be possessed of my printing, &c., on moderate terms, in which I heartily join.

"The intention of this is, therefore, to beg the favor of you to propose and recommend this affair, as Mr. Godfroy may point out the way. I want only to set on foot a treaty; if they will not come to my terms, I may possibly come to theirs. Suppose we reduce the price to six thousand pounds. Louis the Fourteenth would have given three times that sum, or Czar Peter. Let the reason of my parting with it be, the death of my son and intended successor, and, having acquired a moderate fortune, I wish to consult my ease in the afternoon of life, as I am now turned of sixty."

The French government did not accept the offer. Baskerville died on the 8th of January, 1775. In the year 1779, his types were purchased by a literary Society in Paris for £3700, and were employed in printing Beaumarchais' edition of Voltaire.

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support your character against the charge; he knew what he felt, and could see the reason of it, and several other gentlemen among his friends had made the same observation, &c.

Yesterday he called to visit me, when, mischievously bent to try his judgment, I stepped into my closet, tore off the top of Mr. Caslon's specimen, and produced it to him as yours, brought with me from Birmingham, saying, I had been examining it, since he spoke to me, and could not for my life perceive the disproportion he mentioned, desiring him to point it out to me. He readily undertook it, and went over the several fonts, showing me everywhere what he thought instances of that disproportion, and declared that he could not then read the specimen without feeling very strongly the pain he had mentioned to me. I spared him that time the confusion of being told that these were the types he had been reading all his life with so much ease to his eyes, the types his adored Newton is printed with, on which he has pored not a little; nay, the very types his own book is printed with (for he is himself an author), and yet never discovered this painful disproportion in them, till he thought they were yours. I am, &c., B. FRANKLIN.

CXCIV

TO MRS. DEBORAH FRANKLIN

LONDON, 1760.

MY DEAR CHILD:—Yesterday I received your letter of February 10th, in which you mention that it

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was some months since you heard from me. During my journey I wrote several times to you, particularly from Liverpool and Glasgow, and since my return some very long letters, that might have been with you before your last to me, but I suppose the severe winter on your coast, among other delays, has kept the vessels out. One packet, *Bonnel*, was blown quite back to England.

I am sorry for the death of your black boy, as you seem to have had a regard for him. You must have suffered a great deal in the fatigue of nursing him in such a distemper. F—— has wrote me a very idle letter, desiring me not to furnish the woman, pretending to be his wife, with any thing on his account, and says the letters she shows are a forgery. But I have one she left with me, in which he acknowledges her to be his wife, and the children his, and I am sure it is his handwriting by comparing it with this he has now wrote to me and a former one. So he must be a very bad man, and I am glad I never knew him. She was sick and perishing with her children in the beginning of the winter, and has had of me in all about four guineas. What is become of her now, I know not. She seemed a very helpless body, and I found her in some falsehoods that disgusted me; but I pitied the poor children, the more as they were descended, though remotely, from our good old friends, whom you remember.

I have now the pleasure to acquaint you that our business draws near a conclusion, and that in less than a month we shall have a hearing, after which

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I shall be able to fix a time for my return.[1] My love to all, from, dear Debby, your affectionate husband,

B. FRANKLIN.

CXCV

TO THE PRINTER OF THE LONDON CHRONICLE

SIR:—I met lately with an old quarto book on a stall, the titlepage and the author's name wanting, but containing discourses, addressed to some king of Spain, extolling the greatness of monarchy, translated into English, and said in the last leaf to be printed at London, by Bonham Norton and John Bill, "Printers to the King's most excellent Majestie, MDCXXIX." The author appears to have been a Jesuit, for, speaking of that order in two places, he calls it *our Society*. Give me leave to communicate to the public a chapter of it, so *apropos* to our present situation (only changing Spain for France), that I think it well worth general attention and observation, as it discovers the arts of our enemies, and may therefore help in some degree to put us on our guard against them.

What effect the artifices here recommended might have had in the times when our author wrote, I cannot pretend to say; but I believe, the present age being more enlightened and our people better acquainted than formerly with our true national interest, such arts can now hardly prove so generally

[1] The business was not concluded so soon as he anticipated. The hearing came on, but a strong opposition was made by the Proprietors' counsel against the Pennsylvania claims.

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successful; for we may with pleasure observe, and to the honor of the British people, that, though writings and discourses like these have lately not been wanting, yet few in any of the classes he particularizes seem to be affected by them, but all ranks and degrees among us persist hitherto in declaring for a vigorous prosecution of the war, in preference to an unsafe, disadvantageous, or dishonorable peace; yet, as a little change of fortune may make such writings more attended to, and give them greater weight, I think the publication of this piece, as it shows the spring from whence these scribblers draw their poisoned waters, may be of public utility.

A Briton.

"Chap. XXXIV

"*On the Means of disposing the Enemie to Peace.*

"Warres, with whatsoever Prudence undertaken, and conducted, do not always succeed. Many Thinges out of Man's Power to governe, such as Dearth of Provision, Tempests, Pestilence, and the like, oftentimes interfering and totally overthrowing the best Designes; so that these Enemies (England and Holland) of our Monarchy though apparently at first the weaker, may by disastrous Events of Warre, on our Parte, become the stronger, and though not in such degree as to endanger the Bodie of this great Kingdom, yet, by their greater Power of Shipping and Aptness in Sea Affairs, to be able to cut off, if I may so speake, some of its smaller Limbs and Members that are remote therefrom and

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not easily defended, to wit, our Islands and Colonies in the Indies; thereby however depriving the Bodie of its wonted Nourishment, so that it must thenceforthe languish and grow weake, if those Parts are not recovered, which possibly may by continuance of Warre be found unlikelie to be done. And the Enemie, puffed up with their successes, and hoping still for more, may not be disposed to Peace on such Termes as would be suitable to the honor of your Majestie, and to the Welfare of your State and Subjects. In such Case, the following Meanes may have good Effect.

"It is well knowne, that these Northerne People, though hardie of Bodie and bold in Fight, be nevertheless, through overmuch Eating and other Intemperance, slowe of Wit, and dull in Understanding, so that they are ofttimes more easilie to be governed and turned by Skill than by Force. There is, therefore, always Hope that, by wise Counsel and dexterous Management, those Advantages, which through cross Accidents in Warre have been lost, may again with Honour be recovered. In this Place I shall say little of the Power of Money secretly distributed among Grandees, or their Friends or Paramours; that Method being in all Ages known and practised. If the *minds* of Enemies can be *changed*, they may be brought to grant willingly and for nothing what much Gold would scarcely have otherwise prevailed to obtaine. Yet, as the procuring this Change is to be by fitte Instruments, some few Doubloones will not unprofitably be distributed by your Majestie. The manner whereof I shall now briefly recite.

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"In those Countries, and particularly in England, there are not wanting Menne of Learning, ingenious Speakers and Writers, who are nevertheless in lowe Estate, and pinched by Fortune. These, being privately gained by proper Meanes, must be instructed in their Sermons, Discourses, Writings, Poems, and Songs, to handle and specially inculcate Points like these which followe. Let them magnifie the Blessings of Peace, and enlarge mightilie thereon, which is not unbecoming grave Divines and other Christian Menne. Let them expatiate on the Miseries of Warre, the Waste of Christian Blood, the growing Scarcitie of Labourers and Workmen, the Dearness of all foreign Wares and Merchandise, the Interruption of Commerce, the Captures of Ships, the Increase and great Burthen of Taxes. Let them represent the Warre as an unmeasurable Advantage to Particulars, and to Particulars only (thereby to excite envie against those, who manage and provide for the same), while so prejudicial to the Commonweale and People in general. Let them represent the Advantages gained against us, as trivial and of little Import; the Places taken from us, as of small Trade and Produce, inconvenient for Situation, unwholesome for Ayre and Climate, useless to their Nations, and greatlie chargeable to keepe, draining the home Countrie both of Menne and Money.

"Let them urge, that, if a Peace be forced on us, and those Places withheld, it will nourishe secret Griefe and Malice in the King and Grandees of Spain, which will ere long breake forthe in new Warres, when those Places may again be retaken,

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without the Merit and Grace of restoring them willingly for Peace's Sake. Let them represent the making or Continuance of Warres, from views of Gaine, to be base and unworthy a brave People, as those made from Views of Ambition are mad and wicked. Let them insinuate, that the Continuance of the present Warre, on their Parte, hath these Ingredients in its Nature. Then let them magnifie the great Power of your Majestie, and the Strength of your Kingdome, the inexhaustible Wealthe of your Mines, the Greatness of your Incomes, and thence your Abilitie of continuing the Warre; hinting withal the new Alliances you may possiblie make; at the same time setting forth the sincere Disposition you have for Peace, and that it is only a Concerne for your Honor, and the Honor of your Realme, that induceth you to insist on the Restitution of the places taken.

"If, with all this, they shrewdly intimate, and cause it to be understood by artful Wordes and believed, that their own Prince is himself in Heart for Peace, on your Majestie's Termes, and grieved at the Obstinacy and Perverseness of those among his People, who are for continuing the Warre, a marvellous Effect shall by these Discourses and Writings be produced; and a wonderful strong Partie shall your Majestie raise among your Enemies in Favour of the Peace you desire; insomuch that their own Princes and wisest Counsellours will in a Sorte be constrained to yeeld thereto. For, in this Warre of Wordes, the Avarice and Ambition, the Hope and Fears, and all the Crowd of humane Passions will

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be raised and put in Array to fight for your Interests against the reall and substantiall Interest of their own Countries. The simple and undiscerning Many shall be carried away by the Plausibilitie and Well-seeming of these Discourses; and the Opinions becoming more popular, all the Rich Menne, who have great Possessions, and fear the Continuance of Taxes, and hope Peace will end them, shall be emboldened thereby to crie aloud for Peace; their Dependents, who are many, must do the same.

"All Merchaunts, fearing Loss of Ships and greater Burthens on Trade by further Duties and Subsidies, and hoping greater Profits by the ending of the Warre, shall join in the crie for Peace. All the Usurers and Lenders of Money to the State, who on a Peace hope great Profits on their Bargains, and fear if the Warre be continued the State shall become bankeroute, and unable to pay them; these, who have no small Weighte, shall join the crie for Peace. All, who maligne the bold Conductors of the Warre, and envie the Glorie they may have thereby obtained; these shall crie aloud for Peace, hoping, that, when the Warre shall cease, such Menne becoming less necessarie shall be more lightly esteemed, and themselves more sought after. All the Officers of the Enemie's Armies and Fleets, who wish for Repose and to enjoy their Salaries or Rewardes in Quietnesse and without Peril; these, and their Friends and Families, who desire their Safetie and the Solace of their Societie, shall all crie for Peace.

"All those, who be timorous by Nature, amongste whom be reckoned Menne of Learning that lead

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sedentarie Lives, doing little Exercise of Bodie, and thence obtaining but few and weake Spirits; great Statesmen, whose natural Spirits be exhausted by much Thinking, or depressed by overmuch Feasting; together with all Women, whose Power, weake as they are, is not a little amongste the Menne; these shall incessantly speake for Peace. And finally all Courtiers, who suppose they conforme thereby to the Inclinations of the Prince (*ad Exemplum Regis*, &c.); all who are in Places, fear to lose them, or hope for better; all who are out of Places, and hope to obtaine them; with all the worldly minded Clergy, who seeke Preferment; these, with all the Weighte of their Character and Influence, shall join the crie for Peace; till it becomes one universal Clamour, and no Sound, but that of Peace, Peace, Peace, shall be heard from every Quarter.

"Then shall your Majestie's Termes of Peace be listened to with much readinesse, the Places taken from you be willingly restored, and your Kingdome, recovering its Strength, shall only need to waite a few Years for more favourable Occasions, when the Advantages to your Power, proposed by beginning the Warre, but lost by its bad Successe, shall, with better Fortune, be finally obtained."

CXCVI

TO HUGH ROBERTS

LONDON, 26 February, 1761.

DEAR FRIEND:—I think I have before acknowledged the receipt of your favor of the 15th of the

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5th month, 1760. (I use your own notation, because I cannot tell what month it was, without reckoning.) I thank you for it, however, once more. I received it by the hand of your son, and had the pleasure withal of seeing him grown up a solid, sensible young man. You will have, I see, a great deal of satisfaction in him, and I congratulate you cordially on that head.

I was glad to hear that the Hospital is still supported. I write to the managers by this ship. In my journeys through England and Scotland I have visited several of the same kind, which I think were all in a good way. I send you by this ship sundry of their accounts and rules, which were given me. Possibly you may find a useful hint or two in some of them. I believe we shall be able to make a small collection here; but I cannot promise it will be very considerable.

You tell me you sometimes visit the ancient Junto. I wish you would do it oftener. I know they all love and respect you, and regret your absenting yourself so much. People are apt to grow strange, and not understand one another so well, when they meet but seldom. Since we have held that Club till we are grown gray together, let us hold it out to the end. For my own part, I find I love company, chat, a laugh, a glass, and even a song, as well as ever, and at the same time relish better than I used to do the grave observations and wise sentences of old men's conversation; so that I am sure the Junto will be still as agreeable to me as it ever has been. I therefore hope it will not

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be discontinued as long as we are able to crawl together.[1]

I thank you for the frequent kind visits you are so good as to make to my little family. I now hope in a little time to have the pleasure of seeing them, and thanking my friends in person. With the sincerest esteem and regard, I am, dear friend, yours affectionately,

B. FRANKLIN.

CXCVII

TO MISS MARY STEVENSON

CRAVEN STREET, Monday, 30 March, 1761.

MY DEAR FRIEND:—Supposing the fact that the water of the well at Bristol is warmer after some

[1] One of Franklin's songs for the JUNTO, of a political complexion, has been found among his manuscripts, which was probably written about the time of the Stamp Act, or a little later. The allusion to France, in the last stanza but one, would seem to refer to that period. The author was then in England, and it is not known for what occasion the song was composed.

THE MOTHER COUNTRY—A SONG.

" We have an old mother that peevish has grown;
She snubs us like children that scarce walk alone;
She forgets we 're grown up and have sense of our own,
Which nobody can deny, deny,
Which nobody can deny.

" If we don't obey orders, whatever the case,
She frowns, and she chides, and she loses all pati-
Ence, and sometimes she hits us a slap in the face,
Which nobody can deny, &c.

" Her orders so odd are, we often suspect
That age has impaired her sound intellect;

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time pumping, I think your manner of accounting for that increased warmth very ingenious and probable. It did not occur to me, and therefore I doubted of the fact.

You are, I think, quite right in your opinion, that the rising of the tides in rivers is not owing to the immediate influence of the moon on the rivers. It is rather a subsequent effect of the influence of the moon on the sea, and does not make its appearance in some rivers till the moon has long passed by. I have not expressed myself clearly, if you have understood me to mean otherwise. You know I have mentioned it as a fact, that there are in some rivers several tides all existing at the same time; that is, two, three, or more high-waters, and as many low-waters, in different parts of the same river, which cannot possibly be all effects of the moon's immediate action on that river, but they may be subsequent effects of her action on the sea.

In the enclosed paper you will find my sentiments

But still an old mother should have due respect,
Which nobody can deny, &c.

" Let 's bear with her humors as well as we can;
But why should we bear the abuse of her man?
When servants make mischief, they earn the rattan,
Which nobody should deny, &c.

" Know too, ye bad neighbours, who aim to divide
The sons from the mother, that still she 's our pride;
And if ye attack her we 're all of her side,
Which nobody can deny, &c.

" We 'll join in her lawsuits, to baffle all those,
Who, to get what she has, will be often her foes;
For we know it must all be our own, when she goes,
Which nobody can deny, deny,
Which nobody can deny."

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on several points relating to the air and the evaporation of water. It is Mr. Collinson's copy, who took it from one I sent through his hands to a correspondent in France some years since; I have, as he desired me, corrected the mistakes he made in transcribing, and must return it to him; but if you think it worth while you may take a copy of it. I would have saved you any trouble of that kind, but had not time.

Some day in the next or the following week I purpose to have the pleasure of seeing you at Wanstead. I shall accompany your good mamma thither, and stay till the next morning, if it may be done without incommoding your family too much. We may then discourse any points in that paper that do not seem clear to you, and, taking a walk to Lord Tilney's ponds, make a few experiments there to explain the nature of the tides more fully. In the mean time, believe me to be, with the highest esteem and regard,

Your sincerely affectionate friend,

B. FRANKLIN.

CXCVIII

TO JOSIAH QUINCY

LONDON, 8 April, 1761.

DEAR SIR:—I received your very obliging letter of December 25th, by the hand of your valuable son, who had before favored me now and then with

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a kind visit. I congratulate you on his account, as I am sure you must have a great deal of satisfaction in him. His ingenuous, manly, and generous behaviour, in a transaction here with the Society of Arts, gave me great pleasure, as it was much to his reputation.[1]

I am glad my weak endeavours for our common interest were acceptable to you and my American friends. I shall be very happy indeed if any good arises from them. The people in power here do now seem convinced of the truth of the principles I have inculcated, and incline to act upon them; but how far they will be able to do so at a peace, is still uncertain, especially as the war in Germany grows daily less favorable to us. My kinsman, Williams, was but ill informed in the account he gave you of my situation here. The Assembly voted me fifteen hundred pounds sterling when I left Philadelphia, to defray the expense of my voyage and negotiations in England, since which they have given nothing more, though I have been here near four years. They will, I make no doubt, on winding up the affair, do what is just; but they cannot afford to be extravagant, as that report would make them.

Pray make my best respects acceptable to your amiable family, and do me the justice to believe that no one more sincerely wishes a continuance

[1] The gentleman here mentioned was Edmund Quincy, a merchant of Boston and the eldest son of Josiah Quincy. He had been in trade several years, and went to London to arrange a mercantile correspondence there. He died at sea, March 31, 1768, on his homeward voyage from the West Indies, at the age of thirty-five.

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of your happiness than, dear friend, yours most affectionately,

B. FRANKLIN.[1]

CXCIX

TO HENRY POTTS, ESQ.

CRAVEN STREET, 23d April, 1761.

SIR:—In obedience to the commands of His Majesty's Postmaster General, signified to me by you, I have considered Governor Boone's letter to My Lord Bessborough, and the extract of his letter to John Pownall, Esq., Secretary to the Board of Trade, containing a complaint of some inconveniency to him, arising from "the posts not passing through Perth Amboy and Burlington (the route established by Act of Parliament) in their way between Philadelphia and New York"; and alledging, that "thro' this omission it has happened and may happen again that dispatches received by him from the plantation office could not be answered by the first pacquet, whence he may sometimes appear tardy to their lordships with all the inclination to be otherwise, etc."

It is true that the post route was thro' the towns of Burlington and Amboy in New Jersey, before and

[1] Josiah Quincy, to whom the above letter was written, resided in Braintree, Mass., and was the father of the distinguished patriot, Josiah Quincy, Jr., who will be mentioned hereafter. An early acquaintance and attachment had been formed between Mr. Quincy, the father, and Dr. Franklin, the particulars of which are described by the latter in his autobiography.

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at the time of making the Act of Queen Anne for establishing the post office, and therefore those towns were mentioned in the Act, so far as to settle the rates of postage between them and the cities of New York and Philadelphia; but it has never been understood that the route was established by such mention of those places, or that the Act bound the post-office to continue the posts in any route then used, if one better and more convenient could be found. Nor, indeed, would such restraints in an Act of Parliament relating to America be of utility, but the contrary. For our first settlements there being near the sea, the first roads are of course along the coast where interrupting waters from bays and inlets are more frequent, and rivers wider and more difficult of passage; but in process of time, as the people settle farther back and clear the upland country, more convenient roads are found, the bays and inlets avoided, and the interruption of ferries less frequent, as many rivers are fordable up the country that cannot be cross'd near their mouths but in boats.

Something like this has been the case with regard to the old and new roads thro' the province of New Jersey. As soon as the new road in the upper parts of that province was open'd travellers between Philadelphia and New York began gradually to abandon the old road, which was not so convenient; and after some time, on an application made to Col. Spotswood, then deputy postmaster-general, the post route was also chang'd from the old road to the new.

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This change was made about thirty years ago and some years before I had any concern in the office; but as it was a matter much talk'd of at the time, I remember well the reasons that were given for the change which were these, viz.:

That the ferry over the River Delaware from Bristol to Burlington, to be pass'd in travelling the old road, was a mile and half wide, and in winter often incumbered with ice, so as greatly to delay the post: that the old road, from Burlington to Amboy, was for 50 miles chiefly a heavy loose sand, very fatiguing to the horses; that being thro' a barren country, it was not well-inhabited, nor the inns well supply'd with provisions; that being less travelled than formerly, there was not the same care taken to provide suitable accommodations for travellers, so that no gentlemen passing between New York and Philadelphia, tho' desirous of riding post, could well travel with him: that this gradual disuse of the road occasioned less care to be taken of the bridges, which were often out of repair, so that in rainy seasons, crossing the brooks and branches of rivers became dangerous and sometimes impracticable, to the great delay and injury of travellers: that the ferry over to Amboy, necessary to be pass'd on this road, was near two miles wide, being at the mouth of the Raritan River, and often so rough from high winds, or so incumbered with ice as to be impassable for many hours, to the great delay of the post as well as other travellers: and after the post was got to Amboy, he had still three large ferries to cross between that place and New York, viz.: the ferry

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over to Staten Island, the ferry from Staten Island to Long Island, 3 miles wide, and the ferry from Long Island to New York; in all which places the ferrymen were generally very dilatory, and backward to carry the post in bad weather, availing themselves of every excuse, as they were by law to receive no ferriage of him. On the other hand the new road was over better ground and kept in better repair; there were everywhere good accommodations at the inns; Delaware River was to be cross'd at Trenton and Raritan River at Brunswick, where they were both narrow, and the latter fordable at low water; and the people at Elizabeth Town Point undertook voluntarily to have a stout boat always ready to carry the post and his company directly to New York, by which the three last mentioned ferries were avoided.

The change being accordingly made, the post went no more thro' Burlington and Amboy; but those places on that account suffered very little inconveniency, for an office was still continu'd at each of them, and their letters sent over to proper places on the new post road, to be carried forward by the post; and this was easy to do, it being only cross the ferry from Burlington to Bristol, thro' which the post goes, and but 4 miles from Amboy to Woodbridge thro' which he also goes. And the letters for Burlington were in like manner sent over to that office from Bristol, and those for Amboy sent to that office from Woodbridge. Tho' the letters to and from each place by post were always extremely few, as they are towns of little or no foreign trade, the

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chief dealing with Amboy being with New York, and that of Burlington with Philadelphia, to and from which places boats are going almost every day, by which they always chose to send their letters, even when the post pass'd thro' them. On the other hand, two other large and thriving towns, who make much more use of the post, are accommodated by it on the New York road, viz., Trenton and Brunswick; not to mention Prince Town, where a college is lately erected, Woodbridge and Elizabeth Town, thro' all of which places the new road passes, and where offices have been long established.

It is now near 24 years that I have been concern'd in the management of the offices between Philadelphia and New York, and in all that time have had no complaint made to me of inconvenience from the posts continuing the route I found them in. And I must own myself at a loss to conceive the difficulty Governor Boone mentions of his corresponding regularly with the Board of Trade, and that "dispatches receiv'd from their Lordships *could not* be answered by the first pacquet, thro' the posts' omission of Burlington and Amboy in their route." His Excellency resides at Amboy, and the letters for him which arrive at New York in the pacquet, must be forwarded to him at farthest within three days, as the post goes from New York twice a week and passes within four miles of Amboy at Woodbridge, where the Governor's letters are left, and sent to him immediately by a special messenger from the office there; the post returns twice a week from Philadelphia to New York, and passing thro' Woodbridge,

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takes up and carries forward any letters left there. The pacquet stays at New York at least 20 days, and during that time the post passes 6 times thro' Woodbridge to New York, and would carry forward any letters the Governor should lodge at Woodbridge for that purpose. And if he happens to be at Burlington with his Assembly the post passes equally often thro' Bristol (within a mile and a half of him, only just cross a ferry), where it cannot be much trouble to send his letters. So that on the whole I am persuaded it must appear, when duly considered, that his Excellency's want of punctuality in his correspondence with their Lordships cannot justly be charged to the account of the post-office. Mr. Barnard, immediate predecessor of Governor Boone, tho' he also lived at Amboy, made no complaint of this kind that I ever heard of. Nor did the next preceding Governor Belcher, tho' he lived great part of his time at Burlington. The governors of New Jersey have sometimes liv'd on the new road, at Trenton and at Elizabeth Town; and as there is no fixed place of residence for governors in that province, future governors may happen to chuse some of the towns on the new road; so that if the post route were chang'd to gratify Governor Boone, the next governor might desire to have it back again. And I apprehend that the delays formerly experienced so frequently in the detention of the post by the wide ferries in the winter, would, if the old route was resumed, occasion great dissatisfaction to the governors of Pennsylvania, New York and New England, who, as well as the merchants of their

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great trading towns would probably remonstrate warmly against it.

Nevertheless, if His Majesty's Postmaster General should upon the whole think fit to order the old route to be resumed, and the new one with all the offices so long established upon it to be drop't, it is my duty to carry their orders into execution, which I shall do with great readiness and fidelity. I am, Sir, your most Obedient humble servant.

B. FRANKLIN.[1]

CC

TO EDWARD PENNINGTON [2]

LONDON, 9 May, 1761.

SIR:—I enclose you a letter from your kinsman, Mr. Springet Penn, with whom I had no acquaintance until lately, but have the pleasure to find him a very sensible, discreet young man, with excellent dispositions, which makes me the more regret that the government as well as property of our province should pass out of that line. There has, by his account, been something very mysterious in the conduct of his uncle, Mr. Thomas Penn, towards him. He was his guardian; but instead of endeavouring to educate him at home under his eye in a manner becoming the elder branch of their house, has from his infancy been endeavouring to get rid of him.

[1] From *Documents Relating to the Colonial History of New Jersey*, vol. ix. (first series), p. 265.

[2] Mr. Pennington was an eminent merchant of Philadelphia. There was a family connection between his ancestors and William Penn's first wife, whose name before her marriage was Springet.

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He first proposed sending him to the East Indies. When that was declined, he had a scheme of sending him to Russia; but the young gentleman's mother absolutely refusing to let him go out of the kingdom, unless to Pennsylvania to be educated in the college there, he would by no means hear of his going thither, but bound him an apprentice to a county attorney in an obscure part of Sussex, which, after two years' stay, finding that he was taught nothing valuable, nor could see any company that might improve him, he left, and returned to his mother, with whom he has been ever since, much neglected by his uncle, except lately that he has been a little civil, to get him to join in a power of attorney to W. Peters and R. Hockley for the sale of some Philadelphia lots, of which he is told three undivided fourth parts belong to him. But he is not shown the right he has to them; nor has he any plan of their situation, by which he may be advised of their value; nor was he told, till lately, that he had any such right, which makes him suspect that he may have other rights that are concealed from him.

In some letters to his father's eldest brother, Springet Penn, whose heir he is, he finds that Sir William Keith surveyed for him, the said Springet, a manor of seventy-five thousand acres on the Susquehanna, which he called Springetsbury, and would be glad to know what became of that survey, and whether it was ever conveyed away. By searching the records, you may possibly obtain some light in this and other land affairs, that may be for his interest. The good inclinations you have shown towards

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that interest, in a letter that has been shown to me, encourage me to recommend this matter earnestly to your care and prudence; and the more privately you carry on your inquiries, for the present, the better it will be.

His uncle has lately proposed to him to buy of him Pennsbury manor house, with one thousand acres of the land near the house, pretending that his principal reason for doing it was not the value of the land, but an inclination he had to possess the ancient home of the head of the family, and a little land round it just to support it. You know the situation of that manor, and can judge whether it would be prudent to sell the part proposed from the rest, and will advise him concerning it. He has refused to treat about it at present, as well as to sign the power of attorney for the sale of the city lots; upon which his late guardian has brought in an account against him, and demands a debt of four hundred pounds, which he urges him to pay, for that, as he says, he very much wants the money, which does not seem to look well.

Not only the Land Office may be searched for warrants and surveys to the young gentleman's ancestors, but also the Record Office for deeds of gift from the first proprietor, and other subsequent grants or conveyances. I may tell you in confidence that some lawyers are of opinion that the government was not legally conveyed from the eldest branch to others of the family; but this is to be farther inquired into, and at present it is not to be talked of. I am, with much esteem, Sir, &c., B. FRANKLIN.

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CCI

TO MRS. DEBORAH FRANKLIN

UTRECHT, IN HOLLAND, 14 September, 1761.

MY DEAR CHILD:—I wrote to you just before we left London, that we were about to make a short tour to Holland. I wrote to you since from Antwerp, in Flanders, and am now to acquaint you, that, having seen almost all the principal places, and the things worthy of notice, in those two countries, we are on our return to London, where we hope to be next Saturday or Sunday, that we may not miss the Coronation. At Amsterdam I met with Mr. Crellius and his daughter, that was formerly Mrs. Neigh. Her husband, Dr. Neigh, died in Carolina, and she is married again and lives very well in that city. They treated us with great civility and kindness, and will be so obliging as to forward this letter to you, a ship being bound to New York from Amsterdam. We are in good health, and have had a great deal of pleasure and received a good deal of information in this tour, that may be useful when we return to America. My love to my dear Sally, and affectionate regards to all. Billy presents his duty. I am, my dear Debby, your ever loving husband,

B. FRANKLIN.

CCII

TO MISS MARY STEVENSON

CRAVEN STREET, 29 October, 1761.

My dear Polly's good mamma bids me write two or three lines, by way of apology for her so long

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omitting to write. She acknowledges the receiving of two agreeable letters from her beloved daughter, enclosing one for Sally Franklin, which was much approved (excepting one word only) and sent as directed.

The reasons of her not writing are, that her time all day is fully taken up, during the daylight, with the care of her family, and—lying abed in the morning. And her eyes are so bad that she cannot see to write in the evening—for playing at cards. So she hopes that one, who is all goodness, will certainly forgive her, when her excuses are so substantial. As for the secretary, he has not a word to say in his own behalf, though full as great an offender, but throws himself upon mercy; pleading only that he is, with the greatest esteem and sincerest regard, his dear Polly's ever affectionate friend,

B. FRANKLIN.

CCIII

TO LORD KAMES

LONDON, November, 1761.

MY DEAR LORD:—It is long since I have afforded myself the pleasure of writing to you. As I grow in years, I find I grow more indolent, and more apt to procrastinate. I am indeed a bad correspondent; but what avails confession without amendment?

When I come so late with my thanks for your truly valuable *Introduction to the Art of Thinking*, can I have any right to inquire after your *Elements*

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of Criticism? I promise myself no small satisfaction in perusing that work also, when it shall appear. By the first, you sow thick in the young mind the seeds of good sense concerning moral conduct, which, as they grow and are transplanted into life, must greatly adorn the character and promote the happiness of the person. Permit me to say that I think I never saw more solid, useful matter contained in so small a compass, and yet the method and expression so clear that the brevity occasions no obscurity. In the other you will, by alluring youth to the practice of learning, strengthen their judgment, improve and enlarge their understanding, and increase their abilities of being useful.

To produce the number of valuable men necessary in a nation for its prosperity, there is much more hope from schemes of *early institution* than from *reformation*. And as the power of a single man to do national service, in particular situations of influence, is often immensely great, a writer can hardly conceive the good he may be doing when engaged in works of this kind. I cannot, therefore, but wish you would publish it as soon as your other important employments will permit you to give it the finishing hand.

With these sentiments you will not doubt my being serious in the intention of finishing my *Art of Virtue*. It is not a mere ideal work. I planned it first in 1732. I have from time to time made, and caused to be made, experiments of the method with success. The materials have been growing ever since. The form only is now to be given; in which

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I purpose employing my first leisure, after my return to my *other* country.

Your invitation to make another jaunt to Scotland, and offer to meet us half way *en famille*, was extremely obliging. Certainly I never spent my time anywhere more agreeably, nor have I been in any place where the inhabitants and their conversation left such lastingly pleasing impressions on my mind, accompanied with the strongest inclination once more to visit that hospitable, friendly, and sensible people. The friendship your Lordship in particular honors me with would not, you may be assured, be among the least of my inducements. My son is in the same sentiments with me. But we doubt we cannot have that happiness, as we are to return to America early in the next spring.

I am ashamed that I have been so useless a member to your *Philosophical Society*, since they did me the honor of admitting me. But I think it will not be long before they hear from me. I should be very glad to see Dr. Cullen's paper on *Fire*. When may we expect the publication? I have, as you have heard, been dealing in *Smoke*, and I think it not difficult to manage, when one is once acquainted thoroughly with the principles. But as the causes are various, so must the remedies be; and one cannot prescribe to a patient at such a distance, without first having a clear state of its case. If you should ever take the trouble of sending me a description of the circumstances of your smoky chimneys, perhaps I might offer something useful towards their cure.

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But doubtless you have doctors equally skilful nearer home.

I sent one of your *Principles of Equity* as a present to a particular friend of mine, one of the judges of the Supreme Court in Pennsylvania, where, as there is no court of chancery, equity is often mixed with the common law in their judgments. I since received two letters from him. In the first, when he had read but part of the work, he seemed to think something wanting in it. In the next, he calls his first sentiments in question. I think I will send you the letters, though of no great importance, lest, since I have mentioned them, you should think his remarks might be of more consequence. You can return them when any friend is coming this way.

May I take the freedom of recommending the bearer, Mr. Morgan, to your Lordship's protection. He purposes residing some time in Edinburgh, to improve himself in the study of physic, and I think will one day make a good figure in the profession, and be of some credit to the school he studies in, if great industry and application, joined with natural genius and sagacity, afford any foundation for the presage. He is the son of a friend and near neighbour of mine in Philadelphia, so that I have known him from a child, and am confident the same excellent dispositions, good morals, and prudent behaviour, that have procured him the esteem and affection of all that knew him in his own country, will render him not unworthy the regard, advice, and countenance your Lordship may be so good as to afford him.

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My son (with whom I have lately made the tour of Holland and Flanders) joins with me in best wishes for you and Lady Kames, and your amiable children. We hope, however far we may be removed from you, to hear frequently of your welfare, and of the fortunes of your family; being with the sincerest esteem and regard, my dear friend, yours most affectionately,

B. FRANKLIN.

CCIV

TO DAVID HUME

LONDON, 24 January, 1762.

DEAR SIR:—In compliance with my Lord Marischal's request, communicated to me by you, when I last had the pleasure of seeing you, I now send you what at present appears to me to be the shortest and simplest method of securing buildings, &c., from the mischiefs of lightning. Prepare a steel rod five or six feet long, half an inch thick at its biggest end, and tapering to a sharp point; which point should be gilt to prevent its rusting. Let the big end of the rod have a strong eye or ring of half an inch diameter: Fix this rod upright to the chimney or highest part of the house, by means of staples, so as it may be kept steady. Let the pointed end be upwards, and rise three or four feet above the chimney or building that the rod is fixed to. Drive into the ground an iron rod of about an inch diameter, and ten or twelve feet long, that has also an eye or ring

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in its upper end. It is best that the rod should be at some distance from the foundation of the building, not nearer than ten feet, if your ground will allow so much. Then take as much length of iron rod of about half an inch diameter, as will reach from the eye in the rod above, to that in the rod below; and fasten it securely to those rods, by passing its ends through the rings, and bending those ends till they likewise form rings.

This length of rod may either be in one or several pieces. If in several, let the ends of the pieces be also well hooked to each other. Then close and cover every joint with lead, which is easily done, by making a small bag of strong paper round the joint, tying it close below, and then pouring in the melted lead; it being of use in these junctures, that there should be considerable quantity of metalline contact between piece and piece. For, if they were only hooked together and so touched each other but in points, the lightning, in passing through them, might melt and break them where they join. The lead will also prevent the weakening of the joints by rust. To prevent the shaking of this rod by the wind, you may secure it by a few staples to the building, till it comes down within ten feet of the ground, and thence carry it off to your ground rod; near to which should be planted a post, to support the iron conductor above the heads of people walking under it.

If the building be large and long, as an hundred feet or upwards, it may not be amiss to erect a pointed rod at each end, and form a communication by an iron rod between them. If there be a well

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near the house, so that you can by such a rod form a communication from your top rod to the water, it is rather better to do so than to use the ground rod above mentioned. It may also be proper to paint the iron, to render it more durable by preserving it from rust.

A building thus guarded will not be damaged by lightning, nor any person or thing therein killed, hurt, or set on fire. For either the explosion will be prevented by the operation of the point, or, if not prevented, then the whole quantity of lightning exploded near the house, whether passing from the cloud to the earth, or from the earth to the cloud, will be conveyed in the rods. And though the iron be crooked round the corner of the building, or make ever so many turns between the upper and lower rod, the lightning will follow it, and be guided by it, without affecting the building. I omit the philosophical reasons and experiments on which this practice is founded, for they are many, and would make a book. Besides they are already known to most of the learned throughout Europe. In the American British colonies many houses have been, since the year 1752, guarded by these principles. Three facts have only come to my knowledge of the effects of lightning on such houses.

If I have not been explicit enough in my directions, I shall, on the least intimation, endeavour to supply the defect.

I am, &c.

B. Franklin.

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CCV

TO E. KINNERSLEY

LONDON, 20 February, 1762.

SIR:—I received your ingenious letter of the 12th of March last, and thank you cordially for the account you give me of the new experiments you have lately made in electricity. It is a subject that still affords me pleasure, though of late I have not much attended to it.

Your second experiment, in which you attempted, without success, to communicate positive electricity by vapor ascending from electrized water, reminds me of one I formerly made, to try if negative electricity might be produced by evaporation only. I placed a large heated brass plate, containing four or five square feet, on an electric stand; a rod of metal, about four feet long, with a bullet at its end, extended from the plate horizontally. A light lock of cotton, suspended by a fine thread from the ceiling, hung opposite to, and within an inch of, the bullet. I then sprinkled the heated plate with water, which arose fast from it in vapor. If vapor should be disposed to carry off the electrical, as it does the common, fire from bodies, I expected the plate would, by losing some of its natural quantity, become negatively electrized. But I could not perceive, by any motion in the cotton, that it was at all affected; nor, by any separation of small cork balls suspended from the plate, could it be observed that the plate was in any manner electrified.

Mr. Canton here has also found, that two tea-cups,

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set on electric stands, and filled, one with boiling, the other with cold, water, and equally electrified, continued equally so, notwithstanding the plentiful evaporation from the hot water. Your experiment and his, agreeing, show another remarkable difference between electric and common fire. For the latter quits most readily the body that contains it, where water, or any other fluid, is evaporating from the surface of that body, and escapes with the vapor. Hence the method, long in use in the East, of cooling liquors by wrapping the bottles round with a wet cloth, and exposing them to the wind. Dr. Cullen, of Edinburgh, has given some experiments of cooling by evaporation; and I was present at one made by Dr. Hadley, then Professor of Chemistry at Cambridge, when, by repeatedly wetting the ball of a thermometer with spirit, and quickening the evaporation by the blast of a bellows, the mercury fell from sixty-five, the state of warmth in the common air, to seven, which is twenty-two degrees below freezing; and, accordingly, from some water mixed with the spirit, or from the breath of the assistants, or both, ice gathered in small *spicula* round the ball to the thickness of near a quarter of an inch. To such a degree did the mercury lose the fire it before contained, which, as I imagine, took the opportunity of escaping, in company with the evaporating particles of the spirit, by adhering to those particles.

Your experiment of the Florence flask and boiling water is very curious. I have repeated it, and found it to succeed as you describe it, in two flasks out of three. The third would not charge when filled with

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either hot or cold water. I repeated it, because I remembered I had once attempted to make an electric bottle of a Florence flask, filled with cold water, but could not charge it at all; which I then imputed to some imperceptible cracks in the small, extremely thin bubbles, of which that glass is full, and I concluded none of that kind would do. But you have shown me my mistake. Mr. Wilson had formerly acquainted us that red-hot glass would conduct electricity; but that so small a degree of heat as that communicated by boiling water would so open the pores of extremely thin glass, as to suffer the electric fluid freely to pass, was not before known. Some experiments similar to yours have, however, been made here, before the receipt of your letter, of which I shall now give you an account.

I formerly had an opinion that a Leyden bottle, charged and then sealed hermetically, might retain its electricity for ever; but having afterwards some suspicion that possibly that subtile fluid might, by slow, imperceptible degrees, soak through the glass, and in time escape, I requested some of my friends, who had conveniences for doing it, to make trial, whether, after some months, the charge of a bottle so sealed would be sensibly diminished. Being at Birmingham, in September, 1760, Mr. Bolton of that place opened a bottle that had been charged, and its long tube neck hermetically sealed in the January preceding. On breaking off the end of the neck, and introducing a wire into it, we found it possessed of a considerable quantity of electricity, which was discharged by a snap and spark. This bottle had

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lain near seven months on a shelf, in a closet, in contact with bodies that would undoubtedly have carried off all its electricity, if it could have come readily through the glass. Yet, as the quantity manifested by the discharge was not apparently so great as might have been expected from a bottle of that size well charged, some doubt remained, whether part had escaped while the neck was sealing, or had since, by degrees, soaked through the glass. But an experiment of Mr. Canton's, in which such a bottle was kept under water a week, without having its electricity in the least impaired, seems to show that when the glass is cold, though extremely thin, the electric fluid is well retained by it. As that ingenious and accurate experimenter made a discovery like yours, of the effect of heat in rendering thin glass permeable by that fluid, it is but doing him justice to give you his account of it, in his own words, extracted from his letter to me, in which he communicated it, dated October 31st, 1760, viz.:

"Having procured some thin glass balls, of about an inch and a half in diameter, with stems or tubes, of eight or nine inches in length, I electrified them, some positively on the inside, and others negatively, after the manner of charging the Leyden bottle, and sealed them hermetically. Soon after I applied the naked balls to my electrometer, and could not discover the least sign of their being electrical, but holding them before the fire, at the distance of six or eight inches, they became strongly electrical in a very short time, and more so when they were cool-

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ing. These balls will, every time they are heated, give the electrical fluid to, or take it from, other bodies, according to the *plus* or *minus* state within them. Heating them frequently, I find, will sensibly diminish their power; but keeping one of them under water a week did not appear in the least degree to impair it. That which I kept under water was charged on the 22d of September last, was several times heated before it was kept in water, and has been heated frequently since, and yet it still retains its virtue to a very considerable degree. The breaking two of my balls accidentally gave me an opportunity of measuring their thickness, which I found to be between seven and eight parts in a thousand of an inch.

"A down feather in a thin glass ball, hermetically sealed, will not be affected by the application of an excited tube, or the wire of a charged phial, unless the ball be considerably heated; and if a glass pane be heated till it begins to grow soft, and in that state be held between the wire of a charged phial and the discharging wire, the course of the electrical fluid will not be through the glass, but on the surface, round by the edge of it."

By this last experiment of Mr. Canton's it appears that though by a moderate heat thin glass becomes, in some degree, a conductor of electricity, yet when of the thickness of a common pane it is not, though in a state near melting, so good a conductor as to pass the shock of a discharged bottle. There are other conductors which suffer the electric fluid to

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pass through them gradually, and yet will not conduct a shock. For instance, a quire of paper will conduct through its whole length, so as to electrify a person who, standing on wax, presents the paper to an electrified prime conductor; but it will not conduct a shock even through its thickness only; hence the shock either fails, or passes by rending a hole in the paper. Thus a sieve will pass water gradually, but a stream from a fire-engine would either be stopped by it, or tear a hole through it.

It should seem, that, to make glass permeable to the electric fluid, the heat should be proportioned to the thickness. You found the heat of boiling water, which is but two hundred and ten, sufficient to render the extreme thin glass in a Florence flask permeable even to a shock. Lord Charles Cavendish, by a very ingenious experiment, has found the heat of four hundred requisite to render thicker glass permeable to the common current.

"A glass tube (see Plate I.), of which the part *CB* was solid, had wire thrust in each end, reaching to *B* and *C*.

"A small wire was tied on at *D*, reaching to the floor, in order to carry off any electricity that might run along upon the tube.

"The bent part was placed in an iron pot, filled with iron filings; a thermometer was also put into the filings; a lamp was placed under the pot; and the whole was supported upon glass.

"The wire *A* being electrified by a machine, before the heat was applied, the corks at *E* separated, at first upon the principle of the Leyden phial.

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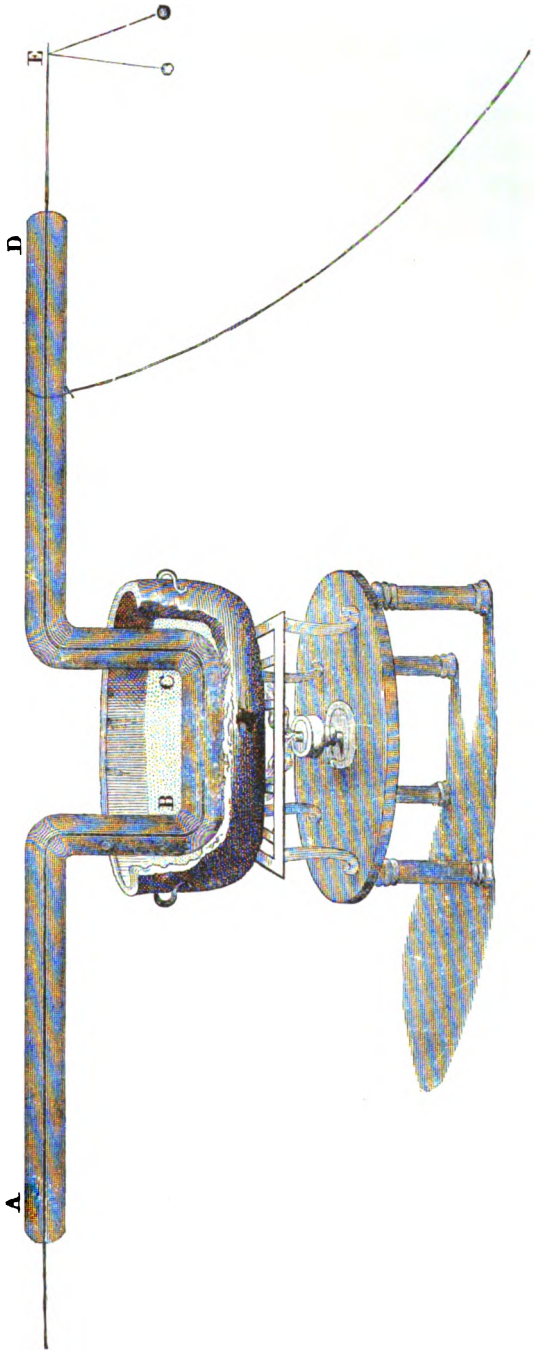

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"But after the part *CB* of the tube was heated to six hundred, the corks continued to separate, though you discharged the electricity by touching the wire at *E*, the electrical machine continuing in motion.

"Upon letting the whole cool, the effect remained till the thermometer was sunk to four hundred."

It were to be wished that this noble philosopher would communicate more of his experiments to the world, as he makes many, and with great accuracy.

You know I have always looked upon and mentioned the equal repulsion, in cases of positive and of negative electricity, as a phenomenon difficult to be explained. I have sometimes, too, been inclined, with you, to resolve all into attraction; but, besides that attraction seems in itself as unintelligible as repulsion, there are some appearances of repulsion that I cannot so easily explain by attraction; this, for one instance. When the pair of cork balls are suspended by flaxen threads from the end of the prime conductor, if you bring a rubbed glass tube near the conductor, but without touching it, you see the balls separate, as being electrified positively; and yet you have communicated no electricity to the conductor, for, if you had, it would have remained there after withdrawing the tube; but the closing of the balls immediately thereupon, shows that the conductor has no more left in it than its natural quantity. Then, again approaching the conductor with the rubbed tube, if, while the balls are separated, you touch with a finger that end of the conductor to which they hang, they will come together

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again, as being, with that part of the conductor, brought to the same state with your finger—that is, the natural state. But the other end of the conductor, near which the tube is held, is not in that state, but in the negative state, as appears on removing the tube; for then part of the natural quantity left at the end near the balls, leaving that end to supply what is wanting at the other, the whole conductor is found to be equally in the negative state. Does not this indicate that the electricity of the rubbed tube had repelled the electric fluid, which was diffused in the conductor while in its natural state, and forced it to quit the end to which the tube was brought near, accumulating itself on the end to which the balls were suspended? I own I find it difficult to account for its quitting that end, on the approach of the rubbed tube, but on the supposition of repulsion; for while the conductor was in the same state with the air—that is, the natural state, it does not seem to me easy to suppose that an attraction should suddenly take place between the air and the natural quantity of the electric fluid in the conductor, so as to draw it to, and accumulate it on, the end opposite to that approached by the tube; since bodies possessing only their natural quantity of that fluid are not usually seen to attract each other, or to affect mutually the quantities of electricity each contains.

There are likewise appearances of repulsion in other parts of nature. Not to mention the violent force with which the particles of water, heated to a certain degree, separate from each other, or those

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of gunpowder, when touched with the smallest spark of fire, there is the seeming repulsion between the same poles of the magnet, a body containing a subtile movable fluid in many respects analogous to the electric fluid. If two magnets are so suspended by strings as that their poles of the same denomination are opposite to each other, they will separate and continue so; or if you lay a magnetic steel bar on a smooth table, and approach it with another parallel to it, the poles of both in the same position, the first will recede from the second, so as to avoid the contact, and may thus be pushed (or at least appear to be pushed) off the table. Can this be ascribed to the attraction of any surrounding body or matter drawing them asunder, or drawing the one away from the other? If not, and repulsion exists in nature, and in magnetism, why may it not exist in electricity? We should not indeed multiply causes in philosophy without necessity; and the greater simplicity of your hypothesis would recommend it to me, if I could see that all appearances would be solved by it. But I find, or think I find, the two causes more convenient than one of them alone. Thus I might solve the circular motion of your horizontal stick, supported on a pivot, with two pins at their ends, pointing contrary ways, and moving in the same direction when electrified, whether positively or negatively: when positively, the air opposite to the points, being electrized positively, repels the points; when negatively, the air opposite the points also, by their means, electrized negatively, attraction takes place between the

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electricity in the air behind the heads of the pins and the negative pins, and so they are, in this case, drawn in the same direction that in the other they were driven. You see I am willing to meet you half way, a complaisance I have not met with in our brother Nollet, or any other hypothesis-maker, and therefore may value myself a little upon it, especially as they say I have some ability in defending even the wrong side of a question, when I take it in hand.

What you give as an established law of the electric fluid, "That quantities of different densities mutually attract each other, in order to restore the equilibrium," [1] is, I think, not well founded, or else not well expressed. Two large cork balls, suspended by silk strings, and both well and equally electrified, separate to a great distance. By bringing into contact with one of them another ball of the same size, suspended likewise by silk, you will take from it half its electricity. It will then, indeed, hang at a less distance from the other, but the full and the half quantities will not appear to attract each other—that is, the balls will not come together. Indeed, I do not know any proof we have, that one quantity

[1] This letter from Franklin is in reply to another from Kinnersley, dated the 12th March, 1762, in which he said:

"The doctrine of repulsion in electrized bodies I begin to be somewhat doubtful of. I think all the phenomena on which it is founded may be well enough accounted for without it. Will not cork balls, electrized negatively, separate as far as when electrized positively? And may not their separation in both cases be accounted for upon the same principle—namely, the mutual attraction of the natural quantity in the air, and that which is denser or rarer in the cork balls? it being one of the established laws of this fluid, that quantities of different densities shall mutually attract each other, in order to restore the equilibrium."

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of electric fluid is attracted by another quantity of that fluid, whatever difference there may be in their densities. And, supposing in nature a mutual attraction between two parcels of any kind of matter, it would be strange if this attraction should subsist strongly while those parcels were unequal, and cease when more matter of the same kind was added to the smallest parcel, so as to make it equal to the biggest. By all the laws of attraction in matter that we are acquainted with, the attraction is stronger in proportion to the increase of the masses, and never in proportion to the difference of the masses. I should rather think the law would be: "That the electric fluid is attracted strongly by all other matter that we know of, while the parts of that fluid mutually repel each other." Hence its being equally diffused (except in particular circumstances) throughout all other matter. But this you jokingly call "electrical orthodoxy." It is so with some at present, but not with all; and, perhaps, it may not always be orthodoxy with anybody. Opinions are continually varying, where we cannot have mathematical evidence of the nature of things; and they must vary. Nor is that variation without its use, since it occasions a more thorough discussion, whereby error is often dissipated, true knowledge is increased, and its principles become better understood and more firmly established.

Air should have, as you observe, "its share of the common stock of electricity, as well as glass, and, perhaps, all other electrics *per se*." But I suppose that, like them, it does not easily part with what it

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has, or receive more, unless when mixed with some non-electric, as moisture, for instance, of which there is some in our driest air. This, however, is only a supposition; and your experiment of restoring electricity to a negatively electrized person, by extending his arm upwards into the air, with a needle between his fingers, on the point of which light may be seen in the night, is, indeed, a curious one. In this town the air is generally moister than with us, and here I have seen Mr. Canton electrify the air in one room positively, and in another, which communicated by a door, he has electrized the air negatively. The difference was easily discovered by his cork balls, as he passed out of one room into another. Père Beccaria, too, has a pretty experiment, which shows that air may be electrized. Suspending a pair of small light balls, by flaxen threads, to the end of his prime conductor, he turns his globe some time, electrizing positively, the balls diverging and continuing separate all the time. Then he presents the point of a needle to his conductor, which gradually drawing off the electric fluid, the balls approach each other, and touch, before all is drawn from the conductor; opening again as more is drawn off, and separating nearly as widely as at first, when the conductor is reduced to the natural state. By this it appears that when the balls came together the air surrounding the balls was just as much electrized as the conductor at that time; and more than the conductor, when that was reduced to its natural state. For the balls, though in the natural state, will diverge, when the air that surrounds them is elec-

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trized *plus* or *minus*, as well as when that is in its natural state and they are electrized *plus* or *minus* themselves. I foresee that you will apply this experiment to the support of your hypothesis, and I think you may make a good deal of it.

It was a curious inquiry of yours, whether the electricity of the air, in clear, dry weather, be of the same density at the height of two or three hundred yards, as near the surface of the earth; and I am glad you made the experiment. Upon reflection, it should seem probable that whether the general state of the atmosphere at any time be positive or negative, that part of it which is next the earth will be nearer the natural state, by having given to the earth in one case, or having received from it in the other. In electrizing the air of a room, that which is nearest the walls, or floor, is least altered. There is only one small ambiguity in the experiment, which may be cleared by more trials; it arises from the supposition that bodies may be electrized positively by the friction of air blowing strongly on them, as it does on the kite and its string. If at some times the electricity appears to be negative, as that friction is the same, the effect must be from a negative state of the upper air.

I am much pleased with your electrical thermometer, and the experiments you have made with it. I formerly satisfied myself, by an experiment with my phial and siphon, that the electricity of the air was not increased by the mere existence of an electric atmosphere within the phial; but I did not know, till you now inform me, that heat may be given to it by

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an electric explosion. The continuance of its rarefaction, for some time after the discharge of your glass jar and of your case of bottles, seems to make this clear. The other experiments on wet paper, wet thread, green grass, and green wood, are not so satisfactory; as possibly the reducing part of the moisture to vapor, by the electric fluid passing through it, might occasion some expansion which would be gradually reduced by the condensation of such vapor. The fine silver thread, the very small brass wire, and the strip of gilt paper are also subject to a similar objection, as even metals, in such circumstances, are often partly reduced to smoke, particularly the gilding on paper.

But your subsequent beautiful experiment on the wire, which you made hot by the electric explosion, and in that state fired gunpowder with it, puts it out of all question, that heat is produced by our artificial electricity, and that the melting of metals in that way is not by what I formerly called a cold fusion. A late instance here of the melting of bell-wire in a house struck by lightning, and parts of the wire burning holes in the floor on which they fell, has proved the same with regard to the electricity of nature. I was too easily led into that error by accounts given, even in philosophical books, and from remote ages downwards, of melting money in purses, swords in scabbards, &c., without burning the inflammable matters that were so near those melted metals. But men are, in general, such careless observers, that a philosopher cannot be too much on his guard in crediting their relations of things extraordinary, and should never

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build an hypothesis on any thing but clear facts and experiments, or it will be in danger of soon falling, as this does, like a house of cards.

How many ways there are of kindling fire, or producing heat in bodies! By the sun's rays, by collision, by friction, by hammering, by putrefaction, by fermentation, by mixtures of fluids, by mixtures of solids with fluids, and by electricity. And yet the fire when produced, though in different bodies it may differ in circumstances, as in color, vehemence, &c., yet in the same bodies is generally the same. Does not this seem to indicate that the fire existed in the body, though in a quiescent state, before it was by any of these means excited, disengaged, and brought forth to action and to view? May it not continue a part, and even a principal part, of the solid substance of bodies? If this should be the case, kindling fire in a body would be nothing more than developing this inflammable principle, and setting it at liberty to act in separating the parts of that body, which then exhibits the appearances of scorching, melting, burning, &c. When a man lights a hundred candles from the flame of one, without diminishing that flame, can it be properly said to have *communicated* all that fire? When a single spark from a flint, applied to a magazine of gunpowder, is immediately attended with this consequence, that the whole is in flame, exploding with immense violence, could all this fire exist first in the spark? We cannot conceive it. And thus we seem led to this supposition, that there is fire enough in all bodies to singe, melt, or burn them, whenever it is, by any means, set at liberty,

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so that it may exert itself upon them, or be disengaged from them. This liberty seems to be afforded it by the passage of electricity through them, which we know can and does, of itself, separate the parts even of water; and, perhaps, the immediate appearances of fire are only the effects of such separations. If so, there would be no need of supposing that the electric fluid *heats itself* by the swiftness of its motion, or heats bodies by the resistance it meets with in passing through them. They would only be heated in proportion as such separation could be more easily made. Thus a melting heat cannot be given to a large wire in the flame of a candle, though it may to a small one; and this, not because the large wire resists *less* that action of the flame which tends to separate its parts, but because it resists it *more* than the smaller wire; or because the force being divided among more parts acts weaker on each.

This reminds me, however, of a little experiment I have frequently made, that shows, at one operation, the different effects of the same quantity of electric fluid passing through different quantities of metal. A strip of tinfoil, three inches long, a quarter of an inch wide at one end, and tapering all the way to a sharp point at the other, fixed between two pieces of glass, and having the electricity of a large glass jar sent through it, will not be discomposed in the broadest part; towards the middle will appear melted in spots; where narrower, it will be quite melted; and about half an inch of it next the point will be reduced to smoke.

You were not mistaken in supposing that your

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account of the effect of the pointed rod, in securing Mr. West's house from damage by a stroke of lightning, would give me great pleasure. I thank you for it most heartily, and for the pains you have taken in giving me so complete a description of its situation, form, and substance, with the draft of the melted point. There is one circumstance, viz., that the lightning was seen to diffuse itself from the foot of the rod over the wet pavement, which seems, I think, to indicate that the earth under the pavement was very dry, and that the rod should have been sunk deeper, till it came to earth moister, and therefore apter to receive and dissipate the electric fluid. And although, in this instance, a conductor formed of nail-rods, not much above a quarter of an inch thick, served well to convey the lightning, yet some accounts I have seen from Carolina give reason to think that larger may be sometimes necessary, at least for the security of the conductor itself, which, when too small, may be destroyed in executing its office, though it does, at the same time, preserve the house. Indeed, in the construction of an instrument so new, and of which we could have so little experience, it is rather lucky that we should at first be so near the truth as we seem to be, and commit so few errors.

There is another reason for sinking deeper the lower end of the rod, and also for turning it outwards under ground to some distance from the foundation; it is this, that water dripping from the eaves falls near the foundation, and sometimes soaks down there in greater quantities, so as to come near the end of the

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rod, though the ground about it be drier. In such case, this water may be exploded, that is, blown into vapor, whereby a force is generated that may damage the foundation. Water reduced to vapor is said to occupy fourteen thousand times its former space. I have sent a charge through a small glass tube, that has borne it well while empty, but when filled first with water, was shattered to pieces, and driven all about the room. Finding no part of the water on the table, I suspected it to have been reduced to vapor; and was confirmed in that suspicion afterwards, when I had filled a like piece of tube with ink, and laid it on a sheet of clean paper, whereon, after the explosion, I could find neither any moisture nor any sully from the ink. This experiment of the explosion of water, which I believe was first made by the most ingenious electrician, Father Beccaria, may account for what we sometimes see in a tree struck by lightning, when part of it is reduced to fine splinters like a broom; the sap-vessels being so many tubes containing a watery fluid, which, when reduced to vapor rends every tube lengthwise. And perhaps it is this rarefaction of the fluid in animal bodies killed by lightning or electricity, that, by separating its fibres, renders the flesh so tender, and apt so much sooner to putrefy. I think, too, that much of the damage done by lightning to stone and brick walls may sometimes be owing to the explosion of water, found during showers, running or lodging in the joints or small cavities or cracks that happen to be in the walls.

Here are some electricians, that recommend knobs instead of points on the upper end of the rods, from a

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supposition that the points invite the stroke. It is true that points draw electricity at greater distances in the gradual, silent way; but knobs will draw at the greatest distance a stroke. There is an experiment that will settle this. Take a crooked wire, of the thickness of a quill, and of such a length as that, one end of it being applied to the lower part of a charged bottle, the upper may be brought near the ball on the top of the wire that is in the bottle. Let one end of this wire be furnished with a knob, and the other may be gradually tapered to a fine point. When the point is presented to discharge the bottle, it must be brought much nearer before it will receive the stroke, than the knob requires to be. Points, besides, tend to repel the fragments of an electrized cloud, knobs draw them nearer. An experiment, which, I believe, I have shown you, of cotton fleece hanging from an electrized body, shows this clearly, when a point or a knob is presented under it.

You seem to think highly of the importance of this discovery, as do many others on our side of the water. Here it is very little regarded; so little, that, though it is now seven or eight years since it was made public, I have not heard of a single house as yet attempted to be secured by it. It is true the mischiefs done by lightning are not so frequent here as with us; and those who calculate chances may perhaps find, that not one death (or the destruction of one house) in a hundred thousand happens from that cause, and that therefore it is scarce worth while to be at any expense to guard against it. But in all countries there are particular situations of buildings

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more exposed than others to such accidents, and there are minds so strongly impressed with the apprehension of them, as to be very unhappy every time a little thunder is within their hearing. It may therefore be well to render this little piece of new knowledge as general and as well understood as possible, since to make us *safe* is not all its advantage; it is some to make us *easy*. And as the stroke it secures us from might have chanced, perhaps, but once in our lives, while it may relieve us a hundred times from those painful apprehensions, the latter may possibly, on the whole, contribute more to the happiness of mankind than the former.

Your kind wishes and congratulations are very obliging.[1] I return them cordially; being, with great regard and esteem, my dear Sir, your affectionate friend and most obedient humble servant,

B. FRANKLIN.

Accounts from Carolina (mentioned in the foregoing Letter) of the Effects of Lightning on two of the Rods commonly affixed to Houses there, for securing them against Lightning.

CHARLESTON, 1 November, 1760.

. . . "It is some years since Mr. Raven's rod was struck by lightning. I hear an account of it was

[1] The closing paragraph of Mr. Kinnersley's letter, which invited the reciprocation of good wishes, ran as follows:

"And now, Sir, I most heartily congratulate you on the pleasure you must have in finding your great and well grounded expectations so far fulfilled. May this method of security from the destructive violence of one of the most awful powers of nature meet with such

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published at the time, but I cannot find it. According to the best information I can now get, he had fixed to the outside of his chimney a large iron rod, several feet in length, reaching above the chimney; and to the top of this rod the points were fixed. From the lower end of this rod, a small brass wire was continued down to the top of another iron rod driven into the earth. On the ground-floor in the chimney stood a gun, leaning against the back wall, nearly opposite to where the brass wire came down on the outside. The lightning fell upon the points, did no damage to the rod they were fixed to; but the brass wire, all down till it came opposite to the top of the gun-barrel, was destroyed.[1] There the lightning made a hole through the wall, or back of the chimney, to get to the gun-barrel,[2] down which it seems to have passed, as, although it did not hurt the barrel, it damaged the butt of the stock, and blew up some bricks of the hearth. The brass wire below the hole in the wall remained good. No other damage, as I can learn, was done to the house. I am told the same house had formerly been struck by lightning, and much damage, before these rods were invented."

further success, as to induce every good and grateful heart to bless God for this important discovery! May the benefit thereof be diffused over the whole globe! May it extend to the latest posterity of mankind and make the name of Franklin, like that of Newton, *immortal!*"

[1] A proof that it was not of sufficient substance to conduct with safety to itself (though with safety *so far* to the wall) so large a quantity of the electric fluid.

[2] A more substantial conductor.

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Mr. William Maine's Account of the Effects of the Lightning on his Rod, dated at Indian Land, in South Carolina, August 28, 1760.

. . . "I had a set of electrical points, consisting of three prongs, of large brass wire tipt with silver, and perfectly sharp, each about seven inches long; these were riveted at equal distances into an iron nut about three quarters of an inch square, and opened at top equally to the distance of six or seven inches from point to point, in a regular triangle. This nut was screwed very tight on the top of an iron rod of about half an inch diameter, or the thickness of a common curtain-rod, composed of several joints, annexed by hooks turned at the ends of each joint, and the whole fixed to the chimney of my house by iron staples. The points were elevated (*a*) six or seven inches above the top of the chimney; and the lower joint sunk three feet in the earth, in a perpendicular direction.

"Thus stood the points on Tuesday last, about five in the evening, when the lightning broke with a violent explosion on the chimney, cut the rod square off just under the nut, and, I am persuaded, melted the points, nut, and top of the rod, entirely up; as, after the most diligent search, nothing of either was found (*b*), and the top of the remaining rod was cased over with a congealed solder. The lightning ran down the rod, starting almost all the staples (*c*), and unhooking the joints without affecting the rod (*d*), except on the inside of each hook where the joints were coupled, the surface of which was melted (*e*),

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and left as cased over with solder. No part of the chimney was damaged (*f*), only at the foundation (*g*), where it was shattered almost quite round, and several bricks were torn out (*h*). Considerable cavities were made in the earth quite round the foundation, but most within eight or nine inches of the rod. It also shattered the bottom weather-board (*i*) at one corner of the house, and made a large hole in the earth by the corner post. On the other side of the chimney, it ploughed up several furrows in the earth, some yards in length. It ran down the inside of the chimney (*k*), carrying only soot with it, and filled the whole house with its flash (*l*), smoke, and dust. It tore up the hearth in several places (*m*), and broke some pieces of China in the buffet (*n*). A copper tea-kettle standing in the chimney was beat together, as if some great weight had fallen upon it (*o*); and three holes, each about half an inch diameter, melted through the bottom (*p*). What seems to me the most surprising is, that the hearth under the kettle was not hurt, yet the bottom of the kettle was drove inward, as if the lightning proceeded from under it upwards (*q*), and the cover was thrown to the middle of the floor (*r*). The fire-dogs, an iron loggerhead, an Indian pot, an earthen cup, and a cat were all in the chimney at the time unhurt, though a great part of the hearth was torn up (*s*). My wife's sister, two children, and a negro wench were all who happened be in the house at the time; the first and one child sat within five feet of the chimney, and were so stunned that they never saw the lightning nor heard the explosion; the wench, with the other child in her

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arms, sitting at a greater distance, was sensible of both; though every one was so stunned that they did not recover for some time; however, it pleased God that no farther mischief ensued. The kitchen, at ninety feet distance, was full of negroes, who were all sensible of the shock; and some of them tell me that they felt the rod about a minute after, when it was so hot that they could not bear it in hand."

Remarks by Benjamin Franklin

The foregoing very sensible and distinct account may afford a good deal of instruction relating to the nature and effects of lightning, and to the construction and use of this instrument for averting the mischiefs of it. Like other new instruments, this appears to have been at first in some respects imperfect; and we find that we are, in this as in others, to expect improvement from experience chiefly; but there seems to be nothing in the account that should discourage us in the use of it; since, at the same time that its imperfections are discovered, the means of removing them are pretty easily to be learnt from the circumstances of the account itself; and its utility upon the whole is manifest.

One intention of the pointed rod is, to *prevent* a stroke of lightning. (See Vol. II., page 431; Vol. III., page 77.) But, to have a better chance of obtaining this end, the points should not be too near to the top of the chimney or highest part of the building to which they are affixed, but should be extended five or six

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feet above it; otherwise their operation in silently drawing off the fire (from such fragments of cloud as float in the air between the great body of cloud and the earth) will be prevented. For the experiment with the lock of cotton hanging below the electrified prime conductor shows, that a finger under it, being a blunt body, extends the cotton, drawing its lower point downwards; when a needle, with its point presented to the cotton, makes it fly up again to the prime conductor; and that this effect is strongest when as much of the needle as possible appears above the end of the finger; grows weaker as the needle is shortened between the finger and thumb; and is reduced to nothing when only a short part below the point appears above the finger. Now, it seems, the points of Mr. Maine's rod were elevated only (*a*) *six or seven inches above the top of the chimney;* which, considering the bulk of the chimney and the house, was too small an elevation. For the great body of matter near them would hinder their being easily brought into a negative state by the repulsive power of the electrized cloud, in which negative state it is that they attract most strongly and copiously the electric fluid from other bodies and convey it into the earth.

(*b*) *Nothing of the points, &c., could be found.* This is a common effect. (See *supra*, page 79.) Where the quantity of the electric fluid passing is too great for the conductor through which it passes, the metal is either melted, or reduced to smoke and dissipated; but where the conductor is sufficiently large, the fluid passes in it without hurting it. Thus these three wires were destroyed, while the rod to which they

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were fixed, being of greater substance, remained unhurt; its end only, to which they were joined, being a little melted, some of the melted part of the lower ends of those wires uniting with it, and appearing on it like solder.

(*c*) (*d*) (*e*) As the several parts of the rod were connected only by the ends being bent round into hooks, the contact between hook and hook was much smaller than the rod; therefore the current through the metal, being confined in those narrow passages, melted part of the metal, as appeared on examining the inside of each hook. Where metal is melted by lightning, some part of it is generally exploded; and these explosions in the joints appear to have been the cause of unhooking them, and, by that violent action, of starting also most of the staples. We learn from hence, that a rod in one continued piece is preferable to one composed of links or parts hooked together.

(*f*) *No part of the chimney was damaged;* because the lightning passed in the rod. And this instance agrees with others in showing, that the second and principal intention of the rods is obtainable, viz., that of *conducting* the lightning. In all the instances yet known of the lightning's falling on any house guarded by rods, it has pitched down upon the point of the rod, and has not fallen upon any other part of the house. Had the lightning fallen on this chimney, unfurnished with a rod, it would probably have rent it from top to bottom, as we see, by the effects of the lightning on the points and rod, that its quantity was very great; and we know that many chimneys have been so demolished. But *no part of this was damaged,*

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only (f) (g) (h) at the foundation, where it was shattered, and several bricks torn out. Here we learn the principal defect in fixing this rod. The lower joint, being sunk but three feet into the earth, did not, it seems, go low enough to come at water, or a large body of earth so moist as to receive readily from its end the quantity it conducted. The electric fluid therefore, thus accumulated near the lower end of the rod, quitted at the surface of the earth, dividing in search of other passages. Part of it tore up the surface in furrows, and made holes in it; part entered the bricks of the foundation, which being near the earth are generally moist, and, in exploding that moisture, shattered them. (See *supra*, page 388.) Part went through or under the foundation, and got under the hearth, blowing up great part of the bricks (*m*) (*s*), and producing the other effects (*o*) (*p*) (*q*) (*r*). The iron dogs, loggerhead, and iron pot were not hurt, being of sufficient substance, and they probably protected the cat. The copper tea-kettle, being thin, suffered some damage. Perhaps, though found on a sound part of the hearth, it might at the time of the stroke have stood on the part blown up, which will account both for the bruising and melting.

That *it ran down the inside of the chimney* (*k*), I apprehend must be a mistake. Had it done so, I imagine it would have brought something more than soot with it; it would probably have ripped off the pargeting, and brought down fragments of plaster and bricks. The shake, from the explosion on the rod, was sufficient to shake down a good deal of loose soot. Lightning does not usually enter houses

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by the doors, windows, or chimneys, as open passages, in the manner that air enters them; its nature is, to be attracted by substances, that are conductors of electricity; it penetrates and passes *in* them, and, if they are not good conductors, as are neither wood, brick, stone, nor plaster, it is apt to rend them in its passage. It would not easily pass through the air from a cloud to a building, were it not for the aid afforded in its passage by intervening fragments of clouds below the main body, or by the falling rain.

It is said that *the house was filled up with its flash* (*l*). Expressions like this are common in accounts of the effects of lightning, from which we are apt to understand that the lightning filled the house. Our language indeed seems to want a word to express the *light* of lightning, as distinct from the lightning itself. When a tree on a hill is struck by it, the lightning of that stroke exists only in a narrow vein between the cloud and tree, but its light fills a vast space many miles round; and people at the greatest distance from it are apt to say: "The lightning came into our rooms through our window." As it is in itself extremely bright, it cannot, when so near as to strike a house, fail illuminating highly every room in it through the windows; and this I suppose to have been the case at Mr. Maine's; and that, except in and near the hearth, from the causes above mentioned, it was not in any other part of the house; *the flash* meaning no more than *the light* of the lightning. It is for want of considering this difference, that people suppose there is a kind of lightning not attended with thunder. In fact, there is probably

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a loud explosion accompanying every flash of lightning, and at the same instant; but as sound travels slower than light, we often hear the sound some seconds of time after having seen the light; and as sound does not travel so far as light, we sometimes see the light at a distance too great to hear the sound.

(*n*) The *breaking some pieces of China in the buffet*, may nevertheless seem to indicate that the lightning was there; but as there is no mention of its having hurt any part of the buffet, or of the walls of the house, I should rather ascribe that effect to the concussion of the air, or shake of the house by the explosion.

Thus to me it appears that the house and its inhabitants were saved by the rod, though the rod itself was unjointed by the stroke; and that, if it had been made of one piece, and sunk deeper in the earth, or had entered the earth at a greater distance from the foundation, the mentioned small damages (except the melting of the points) would not have happened.

CCVI

TO MISS MARY STEVENSON

Monday morning, 8 March, 1762.

DEAR POLLY:—Your good mamma has just been saying to me that she wonders what can possibly be the reason she has not had a line from you in so long a time. I have made no complaint of that kind, being conscious that, by not writing myself, I have forfeited all claim to such favor, though no letters give

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me more pleasure, and I often wish to hear from you; but indolence grows upon me with years, and writing grows more and more irksome to me.

Have you finished your course of philosophy? No more doubts to be resolved? No more questions to ask? If so, you may now be at full leisure to improve yourself in cards. Adieu, my dear child, and believe me ever your affectionate friend,

B. FRANKLIN.

P. S.—Respects to Mrs. Tickell, &c. Mamma bids me tell you she is lately much afflicted and half a cripple with the rheumatism. I send you two or three French *Gazettes de Médecine*, which I have just received from Paris, wherein is a translation of the extract of a letter you copied out for me. You will return them with my French letters on Electricity, when you have perused them.

CCVII

TO MISS MARY STEVENSON

LONDON, 22 March, 1762.

I must retract the charge of idleness in your studies, when I find you have gone through the doubly difficult task of reading so big a book, on an abstruse subject, and in a foreign language.

In answer to your question concerning the Leyden phial. The hand that holds the bottle receives and conducts away the electric fluid that is driven out of the outside by the repulsive power of that which is

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forced into the inside of the bottle. As long as that power remains in the same situation, it must prevent the return of what it had expelled; though the hand would readily supply the quantity if it could be received. Your affectionate friend,

B. FRANKLIN.

CCVIII

TO MRS. DEBORAH FRANKLIN

LONDON, 24 March, 1762.

MY DEAR CHILD:—I condole with you most sincerely on the death of our good mother,[1] being extremely sensible of the distress and affliction it must have thrown you into. Your comfort will be, that no care was wanting on your part towards her, and that she had lived as long as this life could afford her any rational enjoyment. It is, I am sure, a satisfaction to me, that I cannot charge myself with having ever failed in one instance of duty and respect to her during the many years that she called me son. The circumstances attending her death were indeed unhappy in some respects; but something must bring us all to our end, and few of us shall see her length of days. My love to brother John Read, and sister and cousin Debby, and young cousin Johnny Read, and let them all know that I sympathize with them all affectionately.

This I write in haste, Mr. Beatty having just called on me to let me know, that he is about to set out for

[1] Mrs. Read, the mother of Mrs. Franklin.

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Portsmouth, in order to sail for America. I am finishing all business here in order for my return, which will either be in the Virginia fleet, or by the packet of May next; I am not yet determined which. I pray God grant us a happy meeting.

We are all well, and Billy presents his duty. Mr. Strahan has received your letter, and wonders he has not been able to persuade you to come over. Mrs. Stevenson desires her compliments; she expected Sally would have answered her daughter's letter, that went with the gold needle. I have received yours by the last packet, and one from our friend Mr. Hughes. I will try to write a line to him if I have time. If not, please to tell him I will do all I can to serve him in his affair. Acquaint Mr. Charles Norris that I send him a gardener in Bolitho's ship. The particulars of your letters I shall answer by the same ship. I can now only add that I am, as ever, my dear Debby, your affectionate husband,

B. FRANKLIN.

CCIX

FROM DAVID HUME TO B. FRANKLIN

EDINBURGH, 10 May, 1762.

DEAR SIR:—I have a great many thanks to give you for your goodness in remembering my request, and for the exact description, which you sent me of your method of preserving houses from thunder. I communicated it to our Philosophical Society, as you gave me permission; and they desire me to tell you,

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that they claim it as their own, and intend to enrich with it the first collection, which they may publish. The established rule of our Society is, that, after a paper is read to them, it is delivered by them to some member, who is obliged, in a subsequent meeting, to read some paper of remarks upon it.

It was communicated to our friend, Mr. Russel; who is not very expeditious in finishing any undertaking; and he did not read his remarks till the last week, which is the reason why I have been so late in acknowledging your favor. Mr. Russel's remarks, besides the just praises of your invention, contained only two proposals for improving it. One was that in houses where the rain-water is carried off the roof by a lead pipe, this metallic body might be employed as a conductor to the electric fire, and save the expense of a new apparatus. Another was, that the wire might be carried down to the foundation of the house, and be thence conveyed below ground to the requisite distance, which would better secure it against accidents. I thought it proper to convey to you these two ideas of so ingenious a man, that you might adopt them, if they appear to you well founded.

I am very sorry that you intend soon to leave our hemisphere. America has sent us many good things, gold, silver, sugar, tobacco, indigo, &c.; but you are the first philosopher, and indeed the first great man of letters, for whom we are beholden to her. It is our own fault that we have not kept him; whence it appears that we do not agree with Solomon, that wisdom is above gold, for we take care never to send

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back an ounce of the latter which we once lay our fingers upon.

I saw yesterday our friend Sir Alexander Dick, who desires me to present his compliments to you. We are all very unwilling to think of your settling in America, and that there is some chance for our never seeing you again; but no one regrets it more than does,

Dear Sir,

Your most affectionate humble servant,

DAVID HUME.

CCX

TO DAVID HUME [1]

LONDON, 19 May, 1762.

DEAR SIR:—It is no small pleasure to me to hear from you that my paper on the means of preserving buildings from damage by lightning was acceptable to the Philosophical Society. Mr. Russel's proposals of improvement are very sensible and just. A leaden spout or pipe is undoubtedly a good conductor, so far as it goes. If the conductor enters the ground just at the foundation, and from thence is carried horizontally to some well, or to a distant rod driven downright into the earth, I would then propose that the part under the ground should be lead, as less liable to consume with rust than iron. Because, if the conductor near the foot of the wall should be wasted, the

[1] The letter from Mr. Hume, to which this is a reply, may be seen *supra*, under date of May 10, 1762.

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lightning might act on the moisture of the earth, and by suddenly rarefying it occasion an explosion that may damage the foundation. In the experiment of discharging my large case of electrical bottles through a piece of small glass tube filled with water, the suddenly rarefied water has exploded with a force equal, I think, to that of so much gunpowder; bursting the tube into many pieces, and driving them with violence in all directions and to all parts of the room. The shivering of trees into small splinters, like a broom, is probably owing to this rarefaction of the sap in the longitudinal pores, or capillary pipes, in the substance of the wood. And the blowing up of bricks or stones in a hearth, rending stones out of a foundation, and splitting of walls, are also probably effects sometimes of rarefied moisture in the earth, under the hearth, or in the walls. We should therefore have a durable conductor under ground, or convey the lightning to the earth at some distance.

It must afford Lord Marischal a good deal of diversion to preside in a dispute so ridiculous as that you mention. Judges in their decisions often use precedents. I have somewhere met with one that is what the lawyers call a *case in point*. The Church people and the Puritans in a country town had once a bitter contention concerning the erecting of a Maypole, which the former desired and the latter opposed. Each party endeavoured to strengthen itself by obtaining the authority of the mayor, directing or forbidding a Maypole. He heard their altercation with great patience, and then gravely determined thus: "You, that are for having no Maypole, shall have no

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Maypole; and you, that are for having a Maypole, shall have a Maypole. Get about your business, and let me hear no more of this quarrel." [1]

Your compliment of *gold* and *wisdom* is very obliging to me, but a little injurious to your country. The various value of every thing in every part of this world arises, you know, from the various proportions of the quantity to the demand. We are told that gold and silver in Solomon's time were so plenty, as to be of no more value in his country than the stones in the street. You have here at present just such a plenty of wisdom. Your people are, therefore, not to be censured for desiring no more among them than they have; and if I have *any*, I should certainly carry it where, from its scarcity, it may probably come to a better market.

I nevertheless regret extremely the leaving a country in which I have received so much friendship, and friends whose conversation has been so agreeable and so improving to me; and that I am henceforth to reside at so great a distance from them is no small mortification to, my dear friend, yours most affectionately,

B. FRANKLIN.

P. S.—My respectful compliments, if you please, to Sir Alexander Dick, Lord Kames, Mr. Alexander, Mr. Russel, and any other inquiring friends. I shall write to them before I leave the Island.

[1] Lord Marischal was a person of consideration in Neufchâtel, to whom Dr. Franklin had communicated, through Mr. Hume, a paper containing directions for putting up lightning rods.

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CCXI

FIRE

CRAVEN STREET, 1762.

Did you ever see people at work with spades and pickaxes, digging a cellar? When they have loosened the earth perhaps a foot deep, that loose earth must be carried off, or they can go no deeper; it is in their way, and hinders the operation of the instruments.

When the first foot of earth is removed, they can dig and loosen the earth a foot deeper. But if those who remove the earth should with it take away the spades and pickaxes, the work will be equally obstructed as if they had left the loose earth unremoved.

I imagine the operation of fire upon fuel with the assistance of air may be in some degree similar to this. Fire penetrates bodies, and separates their parts; the air receives and carries off the parts separated, which, if not carried off, would impede the action of the fire. With this assistance therefore of a moderate current of air, the separation increases, but too violent a blast carries off the fire itself; and thus any fire may be blown out, as a candle by the breath, if the blast be proportionable.

But if air contributed inflammatory matter, as some have thought, then it should seem that, the more air, the more flame would be augmented, which beyond certain bounds does not agree with the fact.

Some substances take fire, that is, are kindled by

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the application of fire, much sooner than others. This is in proportion as they are good or bad conductors of fire, and as their parts cohere with less or more strength. A bad conductor of fire not easily permitting it to penetrate and be absorbed, and its force divided among the whole substance, its operation is so much the stronger on the surface to which it is applied, and is in a small depth of surface strong enough to produce the separation of parts which we will call *burning*. All oils and fats, wax, sulphur, and most vegetable substances, are bad conductors of fire. The oil of a lamp, burning at the top, may be scarce warm at the bottom; a candle or a stick of wood, inflamed at one end, is cool at the other. Metals, which are better conductors, are not so easily kindled, though, when sufficient fire is applied to them to separate their parts, they will all burn. But the fire applied to their surfaces enters more easily, is absorbed and divided; and not enough left on the surface to overcome the cohesion of their parts. A close contact with metals will for the same reason prevent the burning of more inflammable substances. A flaxen thread, bound close round an iron poker, will not burn in the flame of a candle; for it must imbibe a certain quantity of fire before it can burn, that is, before its parts can separate; but the poker, as fast as the fire arrives, takes it from the thread, conducts it away, and divides it in its own substance.

Common fire I conceive to be collected by friction from the common mass of that fluid, in the same manner as the electrical fluid is collected by friction, which I have endeavoured to explain in some of my

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electrical papers, and, to avoid length in this letter, refer you to them. In wheels, the particles of grease and oil acting as so many little rollers, and preventing friction between the wood and wood, do thereby prevent the collection of fire.

CCXII

TO MISS MARY STEVENSON

LONDON, 7 June, 1762.

DEAR POLLY:—I received your favor of the 27th past, and have since expected your intended philosophical epistle. But you have not had leisure to write it!

Your good mamma is now perfectly well, as I think, excepting now and then a few rheumatic complaints, which, however, seem gradually diminishing. I am glad to hear you are about to enjoy the happiness of seeing and being with your friends at Bromley. My best respects to the good Dr. and Mrs. Hawkesworth, and say to the dear ladies that I kiss their hands respectfully and affectionately.

Our ships for America do not sail so soon as I expected; it will be yet five or six weeks before we embark, and leave the old world for the new. I fancy I feel a little like dying saints, who, in parting with those they love in this world, are only comforted with the hope of more perfect happiness in the next. I have, in America, connexions of the most engaging kind; and, happy as I have been in the friendships

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here contracted, *those* promise me greater and more lasting felicity. But God only knows whether these promises shall be fulfilled. Adieu, my dear good girl, and believe me ever your affectionate friend.

B. FRANKLIN.

CCXIII

ELECTRICAL EXPERIMENTS ON AMBER

Saturday, 3 July, 1762.

To try, at the request of a friend, whether amber finely powdered might be melted and run together again by means of the electrical fluid, I took a piece of small glass tube, about two inches and a half long, the bore about one twelfth of an inch diameter, the glass itself about the same thickness. I introduced into this tube some powder of amber, and with two pieces of wire nearly fitting the bore, one inserted at one end, the other at the other, I rammed the powder hard between them in the middle of the tube, where it stuck fast, and was in length about half an inch. Then, leaving the wires in the tube, I made them part of the electric circuit, and discharged through them three rows of my case of bottles. The event was, that the glass was broke into very small pieces and those dispersed with violence in all directions. As I did not expect this, I had not, as in other experiments, laid thick paper over the glass to save my eyes, so several of the pieces struck my face smartly, and one of them cut my lip a little, so as to make it bleed. I could find no part of the amber; but the

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table where the tube lay was stained very black in spots, such as might be made by a thick smoke forced on it by a blast, and the air was filled with a strong smell, somewhat like that from burnt gunpowder. Whence I imagined that the amber was burnt, and had exploded as gunpowder would have done in the same circumstances.

That I might better see the effect on the amber, I made the next experiment in a tube formed of a card rolled up and bound strongly with packthread. Its bore was about one eighth of an inch diameter. I rammed powder of amber into this as I had done into the other, and as the quantity of amber was greater, I increased the quantity of electric fluid, by discharging through it at once five rows of my bottles. On opening the tube I found that some of the powder had exploded; an impression was made on the tube, though it was not hurt, and most of the powder remaining was turned black, which I suppose might be by the smoke forced through it from the burned part; some of it was hard; but as it powdered again when pressed by the fingers, I suppose that hardness not to arise from melting any parts in it, but merely from my ramming the powder when I charged the tube.

B. FRANKLIN.

CCXIV

TO JOHN BAPTIST BECCARIA

LONDON, 13 July, 1762.

REVEREND SIR:—I once promised myself the pleasure of seeing you at Turin; but as that is not

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now likely to happen, being just about returning to my native country, America, I sit down to take leave of you (among others of my European friends that I cannot see) by writing.

I thank you for the honorable mention you have so frequently made of me in your letters to Mr. Collinson and others; for the generous defence you undertook and executed with so much success, of my electrical opinions; and for the valuable present you have made me of your new work, from which I have received great information and pleasure. I wish I could in return entertain you with any thing new of mine on that subject; but I have not lately pursued it. Nor do I know of any one here that is at present much engaged in it.

Perhaps, however, it may be agreeable to you, as you live in a musical country, to have an account of the new instrument lately added here to the great number that charming science was before possessed of. As it is an instrument that seems peculiarly adapted to Italian music, especially that of the soft and plaintive kind, I will endeavour to give you such a description of it, and of the manner of constructing it, that you or any of your friends may be enabled to imitate it, if you incline so to do, without being at the expense and trouble of the many experiments I have made in endeavouring to bring it to its present perfection.

You have doubtless heard the sweet tone that is drawn from a drinking glass by passing a wet finger round its brim. One Mr. Puckeridge, a gentleman from Ireland, was the first who thought of playing

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ARMONICA.

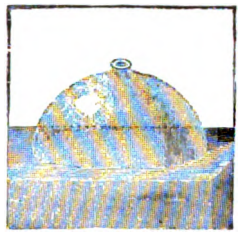

Fig 1.

Fig. 2.

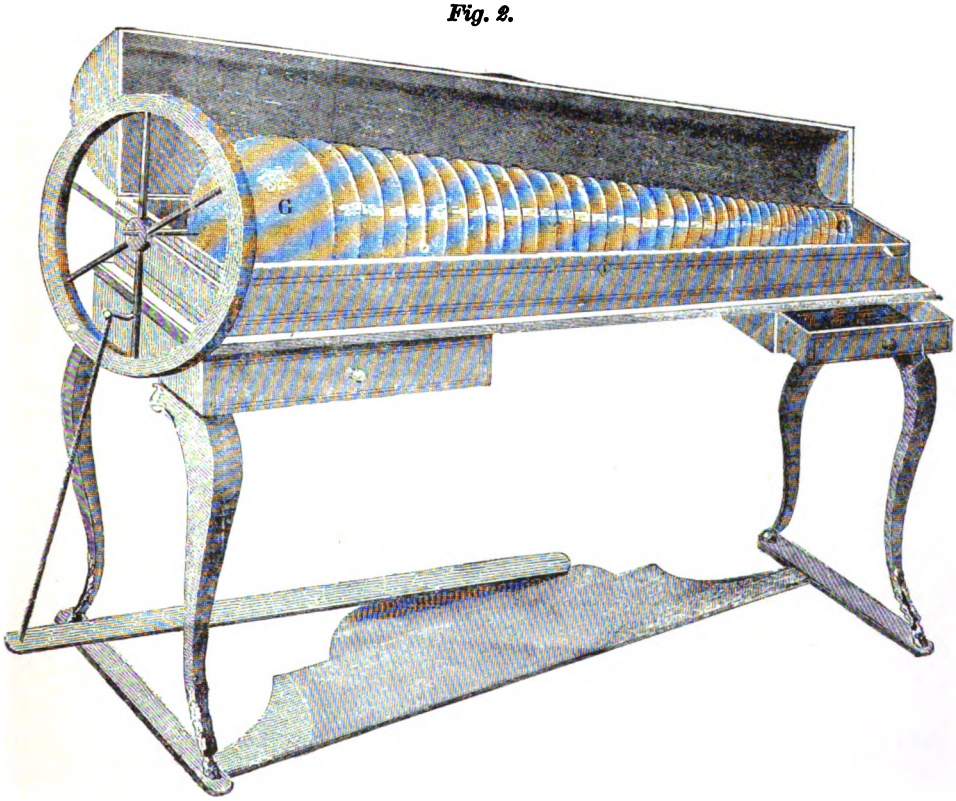

PLATE II., VOL. III., P. 413.

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tunes, formed of these tones. He collected a number of glasses of different sizes, fixed them near each other on a table, and tuned them by putting into them water more or less, as each note required. The tones were brought out by passing his fingers round their brims. He was unfortunately burned here, with his instrument, in a fire which consumed the house he lived in. Mr. E. Delaval, a most ingenious member of our Royal Society, made one in imitation of it, with a better choice and form of glasses, which was the first I saw or heard. Being charmed by the sweetness of its tones, and the music he produced from it, I wished only to see the glasses disposed in a more convenient form, and brought together in a narrower compass, so as to admit of a greater number of tones, and all within reach of hand to a person sitting before the instrument, which I accomplished, after various intermediate trials and less commodious forms, both of glasses and construction, in the following manner.

The glasses are blown as near as possible in the form of hemispheres, having each an open neck or socket in the middle. (See Plate II., Figure 1.) The thickness of the glass near the brim about a tenth of an inch, or hardly quite so much, but thicker as it comes nearer the neck, which in the largest glasses is about an inch deep, and an inch and half wide within, these dimensions lessening, as the glasses themselves diminish in size, except that the neck of the smallest ought not to be shorter than half an inch. The largest glass is nine inches diameter, and the smallest three inches. Between these two are twenty-three different sizes, differing from each other a quarter of

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an inch in diameter. To make a single instrument there should be at least six glasses blown of each size; and out of this number one may probably pick thirty-seven glasses (which are sufficient for three octaves with all the semitones) that will be each either the note one wants or a little sharper than that note, and all fitting so well into each other as to taper pretty regularly from the largest to the smallest. It is true there are not thirty-seven sizes, but it often happens that two of the same size differ a note or half note in tone, by reason of a difference in thickness, and these may be placed one in the other without sensibly hurting the regularity of the taper form.

The glasses being chosen, and every one marked with a diamond the note you intend it for, they are to be tuned by diminishing the thickness of those that are too sharp. This is done by grinding them round from the neck towards the brim, the breadth of one or two inches, as may be required; often trying the glass by a well-tuned harpsichord, comparing the tone drawn from the glass by your finger with the note you want, as sounded by that string of the harpsichord. When you come nearer the matter, be careful to wipe the glass clean and dry before each trial, because the tone is something flatter when the glass is wet than it will be when dry; and grinding a very little between each trial, you will thereby tune to great exactness. The more care is necessary in this, because, if you go below your required tone, there is no sharpening it again but by grinding somewhat off the brim, which will afterwards require polishing, and thus increase the trouble.

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The glasses being thus tuned, you are to be provided with a case for them, and a spindle on which they are to be fixed. (See Plate II., Figure 2.) My case is about three feet long, eleven inches every way wide within at the biggest end, and five inches at the smallest end; for it tapers all the way, to adapt it better to the conical figure of the set of glasses. This case opens in the middle of its height, and the upper part turns up by hinges fixed behind. The spindle, which is of hard iron, lies horizontally from end to end of the box within, exactly in the middle, and is made to turn on brass gudgeons at each end. It is round, an inch diameter at the thickest end, and tapering to a quarter of an inch at the smallest. A square shank comes from its thickest end through the box, on which shank a wheel is fixed by a screw. This wheel serves as a fly to make the motion equable, when the spindle, with the glasses, is turned by the foot like a spinning-wheel. My wheel is of mahogany, eighteen inches diameter, and pretty thick, so as to conceal near its circumference about twenty-five pounds of lead. An ivory pin is fixed in the face of this wheel, and about four inches from the axis. Over the neck of this pin is put the loop of the string that comes up from the movable step to give it motion. The case stands on a neat frame with four legs.

To fix the glasses on the spindle, a cork is first to be fitted in each neck pretty tight, and projecting a little without the neck, that the neck of one may not touch the inside of another when put together, for that would make a jarring. These corks are to be

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perforated with holes of different diameters, so as to suit that part of the spindle on which they are to be fixed. When a glass is put on, by holding it stiffly between both hands, while another turns the spindle, it may be gradually brought to its place. But care must be taken that the hole be not too small, lest, in forcing it up, the neck should split; nor too large, lest the glass, not being firmly fixed, should turn or move on the spindle, so as to touch and jar against its neighbouring glass. The glasses thus are placed one in another, the largest on the biggest end of the spindle, which is to the left hand; the neck of this glass is towards the wheel, and the next goes into it in the same position, only about an inch of its brim appearing beyond the brim of the first; thus proceeding, every glass when fixed shows about an inch of its brim (or three quarters of an inch, or half an inch, as they grow smaller) beyond the brim of the glass that contains it; and it is from these exposed parts of each glass that the tone is drawn, by laying a finger upon one of them as the spindle and glasses turn round.

My largest glass is G, a little below the reach of a common voice, and my highest G, including three complete octaves. To distinguish the glasses the more readily to the eye, I have painted the apparent parts of the glasses within side, every semitone white, and the other notes of the octave with the seven prismatic colors, *viz.*, C, red; D, orange; E, yellow; F, green; G, blue; A, indigo; B, purple; and C, red again; so that glasses of the same color (the white excepted) are always octaves to each other.

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This instrument is played upon, by sitting before the middle of the set of glasses as before the keys of a harpsichord, turning them with the foot, and wetting them now and then with a spunge and clean water. The fingers should be first a little soaked in water, and quite free from all greasiness; a little fine chalk upon them is sometimes useful, to make them catch the glass and bring out the tone more readily. Both hands are used, by which means different parts are played together. Observe, that the tones are best drawn out when the glasses turn *from* the ends of the fingers, not when they turn *to* them.

The advantages of this instrument are, that its tones are incomparably sweet beyond those of any other; that they may be swelled and softened at pleasure by stronger or weaker pressures of the finger, and continued to any length; and that the instrument, being once well tuned, never again wants tuning.

In honor of your musical language, I have borrowed from it the name of this instrument, calling it the Armonica.[1]

With great esteem and respect, I am, &c.,

B. FRANKLIN.

CCXV

TO OLIVER NEAVE

20 July, 1762.

DEAR SIR:—I have perused your paper on sound, and would freely mention to you, as you desire it,

[1] Some other particulars respecting the *Armonica* may be found in a letter to M. Dubourg, under the date of December 8, 1772.—EDITOR.

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every thing that appeared to me to need correction; but nothing of that kind occurs to me, unless it be where you speak of the air as "the *best* medium for conveying sound." Perhaps this is speaking rather too positively, if there be, as I think there are, some other mediums that will convey it farther and more readily. It is a well-known experiment, that the scratching of a pin at one end of a long piece of timber may be heard by an ear applied near the other end, though it could not be heard at the same distance through the air. And two stones being struck smartly together under water, the stroke may be heard at a greater distance by an ear also placed under water, than it can be heard through the air. I think I have heard it near a mile; how much farther it may be heard I know not; but suppose a great deal farther, because the sound did not seem faint, as if at a distance, like distant sounds through air, but smart and strong, and as if present just at the ear. I wish you would repeat these experiments now you are upon the subject, and add your own observations. And, if you were to repeat, with your naturally exact attention and observation, the common experiment of the bell in the exhausted receiver, possibly something new may occur to you, in considering:

1. Whether the experiment is not ambiguous; that is, whether the gradual exhausting of the air, as it creates an increasing difference of pressure on the outside, may not occasion in the glass a difficulty of vibrating, that renders it less fit to communicate to the air without the vibrations that strike it from

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within; and the diminution of the sound arise from this cause, rather than from the diminution of the air?

2. Whether, as the particles of air themselves are at a distance from each other, there must not be some medium between them, proper for conveying sound, since otherwise it would stop at the first particle?

3. Whether the great difference we experience in hearing sounds at a distance, when the wind blows towards us from the sonorous body, or towards that from us, can be well accounted for by adding to or subtracting from the swiftness of sound the degree of swiftness that is in the wind at the time? The latter is so small in proportion, that it seems as if it could scarce produce any sensible effect, and yet the difference is very great. Does not this give some hint, as if there might be a subtile fluid, the conductor of sound, which moves at different times in different directions over the surface of the earth, and whose motion may perhaps be much swifter than that of the air in our strongest winds; and that, in passing through air, it may communicate that motion to the air which we call wind, though a motion in no degree so swift as its own?

4. It is somewhere related that a pistol, fired on the top of an exceeding high mountain, made a noise like thunder in the valleys below. Perhaps this fact is not exactly related; but, if it is, would not one imagine from it that the rarer the air, the greater sound might be produced in it from the same cause?

5. Those balls of fire which are sometimes seen passing over a country, computed by philosophers to

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be often thirty miles high at least, sometimes burst at that height; the air must be exceeding rare there, and yet the explosion produces a sound that is heard at that distance, and for seventy miles round on the surface of the earth, so violent too as to shake buildings and give an apprehension of an earthquake. Does not this look as if a rare atmosphere, almost a vacuum, was no bad conductor of sound?

I have not made up my own mind on these points, and only mention them for your consideration, knowing that every subject is the better for your handling it. With the greatest esteem, I am, &c.,

B. FRANKLIN.

CCXVI

TO MR. WILLIAM STRAHAN AT BATH

LONDON, 20 July, 1762.

DEAR SIR:—I received your very kind letter and invitation to Bath where I am sure I could spend some days very happily with you and Mrs. Strahan, if my time would permit; but the man-of-war, that is to be our convoy, is under sailing orders for the 30th of this month so that 't is impossible for me to leave London till I leave it forever, having at least twenty days' work to do in the ten days that are only left me.

I shall send to the Angel Inn in Oxford a parcel directed to you, containing books I send as presents to some acquaintance there; which I beg you would

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cause to be delivered. I shall write a line to one of them, as you desire. The parcel is to go by the Thursday's coach.

I hope for the pleasure of seeing you before I set out. Billy and Mrs. Stevenson join in respects and best wishes for you and Mrs. Strahan, with, dear Friend,

Yours affectionately,

B. FRANKLIN.

P. S.—I feel here like a thing out of its place, and useless because it is out of its place. How then can I any longer be happy in England? You have great powers of persuasion, and might easily prevail on me to do any thing; but not any longer to do nothing. I must go home. Adieu.

CCXVII

TO MR. WILLIAM STRAHAN AT OXFORD

LONDON, 23 July, 1762.

DEAR STRANEY:—As Dr. Hawkesworth calls you, I send you inclosed a line to my good friend Dr. Kelley; which you will do me the favour to deliver with the parcel directed to him. As it is vacation time I doubt whether any other acquaintance of mine may be in Oxford, or at least any on whose good nature I could so far presume; tho' according to the way of the world, having received a civility, gives one a kind of right to demand another; they took the trouble of showing me Oxford, and therefore

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I might request them to show it to any of my friends. None of the Oxford people are under any other obligation to me than that of having already oblig'd me, and being oblig'd to go on as they have begun. My best respects to Mrs. Strahan, and love to little Peggy. They say we are to sail in a week or ten days. I expect to see you once more. I value myself much, on being able to resolve on doing the right thing, in opposition to your almost irresistible eloquence, secretly supported and backed by my own treacherous inclinations. Adieu, my dear friend.

Yours affectionately,

B. FRANKLIN.

CCXVIII

TO MISS MARY STEVENSON

PORTSMOUTH, 11 August, 1762.

MY DEAR POLLY:—This is the best paper I can get at this wretched inn, but it will convey what is intrusted to it as faithfully as the finest. It will tell my Polly how much her friend is afflicted that he must, perhaps, never again see one for whom he has so sincere an affection, joined to so perfect an esteem, who he once flattered himself might become his own, in the tender relation of a child, but can now entertain such pleasing hopes no more. Will it tell *how much* he is afflicted? No, it cannot.

Adieu, my dearest child. I will call you so. Why should I not call you so, since I love you with all

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the tenderness of a father? Adieu. May the God of all goodness shower down his choicest blessings upon you, and make you infinitely happier than that event would have made you. And wherever I am, believe me to be, with unalterable affection, my dear Polly, your sincere friend,[1]

B. FRANKLIN.

CCXIX

TO LORD KAMES

PORTSMOUTH, 17 August, 1762.

MY DEAR LORD:—I am now waiting here only for a wind to waft me to America, but cannot leave this happy island and my friends in it without extreme regret, though I am going to a country and a people that I love. I am going from the old world to the new; and I fancy I feel like those who are leaving this world for the next: grief at the parting; fear of the passage; hope of the future. These different passions all affect their minds at once; and these have *tendered* me down exceedingly. It is usual for the dying to beg forgiveness of their surviving friends, if they have ever offended them.

Can you, my Lord, forgive my long silence, and my not acknowledging till now the favor you did me in sending me your excellent book? Can you make

[1] Franklin had earnestly desired his son to marry Miss Stevenson. William, however, became too much interested in a young West Indian girl named Downs, and was already affianced to her. The tone of this letter shows that it was a bitter disappointment to the father, as it was no doubt a misfortune to the son.

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some allowance for a fault in others which you have never experienced in yourself; for the bad habit of postponing from day to day what one every day resolves to do to-morrow?—a habit that grows upon us with years, and whose only excuse is we know not how to mend it. If you are disposed to favor me you will also consider how much one's mind is taken up and distracted by the many little affairs one has to settle before the undertaking such a voyage, after so long a residence in a country; and how little, in such a situation, one's mind is fitted for serious and attentive reading; which, with regard to the *Elements of Criticism*, I intended before I should write. I can now only confess and endeavour to amend. In packing up my books, I have reserved yours to read on the passage. I hope I shall therefore be able to write to you upon it soon after my arrival. At present I can only return my thanks, and say that the parts I have read gave me both pleasure and instruction; that I am convinced of your position, new as it was to me, that a good taste in the arts contributes to the improvement of morals; and that I have had the satisfaction of hearing the work universally commended by those who have read it.

And now, my dear Sir, accept my sincere thanks for the kindness you have shown me, and my best wishes of happiness to you and yours. Wherever I am, I shall esteem the friendship you honor me with as one of the felicities of my life; I shall endeavour to cultivate it by a more punctual correspondence; and I hope frequently to hear of your welfare and

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prosperity. Adieu, my dear friend, and believe me ever most affectionately yours,

B. FRANKLIN.[1]

CCXX

TO MR. WILLIAM STRAHAN

PORTSMOUTH, Monday, 23 August, 1762.

DEAR SIR:—I have been two nights on board expecting to sail, but the wind continuing contrary, am just now on shore again, and have met with your kind letter of the 20th. I thank you even for the reproofs it contains, tho' I have not altogether deserved them. I cannot, I assure you, quit even this disagreeable place without regret, as it carries me still farther from those I love, and from the opportunities of hearing of their welfare. The attraction of reason is at present for the other side of the water, but that of inclination will be for this side. You know which usually prevails. I shall probably make but this one vibration and settle here forever. Nothing will prevent it, if I can, as I hope I can, prevail with Mrs. F. to accompany me, especially if we have a peace. I will not tell you that to be near and with you and yours is any part of my inducement. It would look like a compliment extorted from me by your pretences to insignificancy. Nor will I own

[1] Though Dr. Franklin sailed from England in the latter half of August, and soon after writing this letter, he did not reach Philadelphia until the 1st of November. He had been absent five years, having arrived in England in July, 1757. The Assembly of Pennsylvania promptly voted their thanks to him for his services as their agent.

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that your persuasions and arguments have wrought this change in my former resolutions; tho' it is true that they have frequently intruded themselves into my consideration whether I would or not. I trust, however, that we shall once more see each other, and be happy again together, which God, &c.

My love to Mrs. Strahan, and your amiable and valuable children. Heaven bless you all whatever becomes of

Your much oblig'd and affectionate friend,

B. FRANKLIN.

CCXXI

TO JOHN PRINGLE, IN LONDON

PHILADELPHIA, 1 December, 1762.

SIR:—During our passage to Madeira, the weather being warm, and the cabin windows constantly open for the benefit of the air, the candles at night flared and ran very much, which was an inconvenience. At Madeira, we got oil to burn, and with a common glass tumbler or beaker, slung in wire, and suspended to the ceiling of the cabin, and a little wire hoop for the wick, furnished with corks to float on the oil, I made an Italian lamp, that gave us very good light all over the table. The glass at bottom contained water to about one third of its height; another third was taken up with oil; the rest was left empty that the sides of the glass might protect the flame from the wind. There is nothing remarkable in all this; but what follows is particular. At supper, looking on the

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lamp, I remarked that though the surface of the oil was perfectly tranquil, and duly preserved its position and distance with regard to the brim of the glass, the water under the oil was in great commotion, rising and falling in irregular waves, which continued during the whole evening. The lamp was kept burning as a watch-light all night, till the oil was spent and the water only remained. In the morning I observed that though the motion of the ship continued the same, the water was now quiet, and its surface as tranquil as that of the oil had been the evening before. At night again, when oil was put upon it, the water resumed its irregular motions, rising in high waves almost to the surface of the oil, but without disturbing the smooth level of that surface. And this was repeated every day during the voyage.

Since my arrival in America I have repeated the experiment frequently thus. I have put a packthread round a tumbler, with strings to the same, from each side, meeting above it in a knot at about a foot distance from the top of the tumbler. Then putting in as much water as would fill about one third part of the tumbler, I lifted it up by the knot, and swung it to and fro in the air; when the water appeared to keep its place in the tumbler as steadily as if it had been ice. But pouring gently in upon the water about as much oil, and then again swinging it in the air as before, the tranquillity before possessed by the water was transferred to the surface of the oil, and the water under it was agitated with the same commotions as at sea.

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I have shown this experiment to a number of ingenious persons. Those who are but slightly acquainted with the principles of hydrostatics, &c., are apt to fancy immediately that they understand it, and readily attempt to explain it; but their explanations have been different, and to me not very intelligible. Others, more deeply skilled in those principles, seem to wonder at it, and promise to consider it. And I think it is worth considering; for a new appearance, if it cannot be explained by our old principles, may afford us new ones, of use perhaps in explaining some other obscure parts of natural knowledge. I am, &c.,

B. FRANKLIN.

CCXXII

TO WILLIAM STRAHAN

PHILADELPHIA, 2 December, 1762.

DEAR STRANEY:—As good Dr. Hawkesworth calls you, to whom my best respects. I got home well the 1st of November, and had the happiness to find my little family perfectly well, and that Dr. Smith's reports of the diminutions of my friends were all false. My house has been full of a succession of them from morning to night, ever since my arrival, congratulating me on my return with the utmost cordiality and affection. My fellow citizens, while I was on the sea, had, at the annual election, chosen me unanimously, as they had done every year while I was in England, to be their representative in Assembly and would, they say, if I had not disappointed

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them by coming privately to town before they heard of my landing, have met me with 500 horse. Excuse my vanity in writing this to you who know what has provoked me to it. My love to good Mrs. Strahan, and your children, particularly my little wife. I shall write more fully per next opportunity, having now only time to add that I am, with unchangeable affection, my dear friend,

Yours sincerely,

B. FRANKLIN.

Mrs. Franklin and Sally desire their compliments and thanks to you all for your kindness to me while in England.

CCXXIII

TO MR. WHITEFORD

PHILADELPHIA, 7 December, 1762.

DEAR SIR:—I thank you for your kind congratulations on my son's promotion and marriage.[1] If he

[1] Very shortly after Franklin's leaving England, his son William married and was appointed governor of New Jersey. This, his only surviving son, was born in Pennsylvania, in 1731. His father had married Miss Read on the 1st of September, in the year 1730. William may therefore be said to have been born in wedlock, though he was not reputed to be the son of Mrs. Franklin. He did not find a home in his father's house until he was about a year old, from which time he was treated both by the doctor and Mrs. Franklin with all the tenderness and consideration to be expected from the most devoted of parents.

He was educated with care. He was at an early age appointed clerk of the House of Assembly of Pennsylvania and postmaster of Philadelphia. In the French war he attained the rank of captain and served with credit at Ticonderoga. He accompanied his father to England in 1756, where he studied law, and in due time was called to

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makes a good governor and husband (as I hope he will, for I know he has good principles and a good disposition), these events will both of them give me continual pleasure.

The taking of the Havana, on which I congratulate you, is a conquest of the greatest importance, and will doubtless contribute a due share of weight in procuring us reasonable terms of peace. It has been, however, the dearest conquest, by far, that we have made this war, when we consider the terrible havoc made by sickness in that brave army of veterans, now almost totally ruined. I thank you for the

the bar. Not long after this, the University of Oxford accentuated the compliment which it paid to the father in conferring upon him the degree of Doctor of Laws, by conferring the degree of Master of Arts upon his son. On the 9th of September, 1762, his commission as "Governor of Nova Caesarea or New Jersey in America" was issued. He got on very well with his people until the news of the battle of Lexington reached them, and which greatly inflamed them. Lord Sterling, one of the members of the governor's council, immediately accepted a military commission under the Provincial Congress. The governor suspended him. From this moment all harmony between the governor and the council was at an end. The Assembly, which had been prorogued on the 24th of May preceding, was called upon by proclamation to convene again June 20th. This was regarded as a contempt of the Continental Congress, and the governor was thereupon declared by the Assembly an enemy of his country, deprived of his salary, arrested, and finally sent to Connecticut a prisoner of war. He was detained a prisoner there two years and five months. He was then released and repairing to New York, became President of the Board of Associated Royalists.

After a sojourn of about four years in New York, he sailed for England in August, 1782. The personal estate which he was obliged to sacrifice to his loyalty, amounting to £1,800, was restored to him by the English government, and an annual allowance of £300 was made to him, in addition to a pension of £500, or half his salary and perquisites, which had been previously granted to him. He died Nov. 17, 1813, at the age of 82 years.

His marriage, referred to in the letter to Mr. Whiteford, was with a

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humorous and sensible print you sent me, which afforded me and several of my friends great pleasure. The piece from your own pencil is acknowledged to bear a strong and striking likeness, but it is otherwise such a picture of your friend as Dr. S—— would have drawn, *black, and all black.* I think you will hardly understand this remark, but your neighbour Mrs. Stevenson can explain it. Painting has scarce made her appearance among us; but her sister art, poetry, has some votaries. I send you a few blossoms of American verse, the lispings of our young Muses, which I hope your motherly critics will treat with some indulgence.

West Indian lady, whose maiden name was Elizabeth Downs. She is described as amiable and accomplished. She died on the 28th of July, 1778, in the 49th year of her age.

The fact that William Franklin received an appointment of so much dignity as that of governor of the province of New Jersey, at a time when the relations of the colonies and the mother country were already darkened by the shadows of coming dissensions, was regarded with some suspicion by some of the people of Pennsylvania. The appointment was no doubt intended to detach the doctor from the popular party. "I am told," said Thomas Penn, one of the Proprietaries, writing to Governor Hamilton, "you will find Mr. Franklin more tractable, and I believe we shall, in matters of prerogative; as his son must obey instructions, and what he is ordered to do his father cannot well oppose in Pennsylvania."

The artifice had its perfect work upon the son, who, to the infinite chagrin of the father, from that time forth became the servile instrument of the ministry, and in due course of time, as already stated, a pensioned refugee in London.

The ministers, however, were not long in discovering that their blandishments had been wasted upon the doctor, whose zeal and vigilance in maintaining the rights of the colonies increased with every new provocation.

Between the doctor and his son there was no intercourse from the beginning to the end of the war. A partial reconciliation, however, took place in 1784, and just before the former returned from Europe for the last time.—EDITOR.

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I shall never touch the sweet strings of the British lyre, without remembering my British friends, and particularly the kind giver of the instrument, who has my best wishes of happiness for himself and for his wife and his children, when it pleases God to send him any. I am, dear Sir, with the sincerest esteem, &c.,

B. FRANKLIN.

CCXXIV

TO MR. PETER FRANKLIN, AT NEWPORT

. . . You may acquaint the gentlemen that desired you to inquire my opinion of the best method of securing a powder magazine from lightning, that I think they cannot do better than to erect a mast not far from it, which may reach fifteen or twenty feet above the top of it, with a thick iron rod in one piece fastened to it, pointed at the highest end, and reaching down through the earth till it comes to water. Iron is a cheap metal; but, if it were dearer, as this is a public thing, the expense is insignificant; therefore I would have the rod at least an inch thick, to allow for its gradually wasting by rust; it will last as long as the mast, and may be renewed with it. The sharp point for five or six inches should be gilt.

But there is another circumstance of importance to the strength, goodness, and usefulness of the powder, which does not seem to have been enough attended to: I mean the keeping it perfectly dry. For want of a method of doing this, much is spoiled in damp

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magazines, and much so damaged as to become of little value. If, instead of barrels, it were kept in cases of bottles well corked; or in large tin canisters, with small covers shutting close by means of oiled paper between, or covering the joining on the canister; or, if in barrels, then the barrels lined with thin sheet-lead; no moisture in either of these methods could possibly enter the powder, since glass and metals are both impervious to water.

By the latter of these means you see tea is brought dry and crisp from China to Europe, and thence to America, though it comes all the way by sea in the damp hold of a ship. And by this method, grain, meal, &c., if well dried before it is put up, may be kept for ages sound and good.

There is another thing very proper to line small barrels with; it is what they call tinfoil, or leaf-tin, being tin milled between rollers till it becomes as thin as paper, and more pliant, at the same time that its texture is extremely close. It may be applied to the wood with common paste, made with boiling water thickened with flour; and, so laid on, will lie very close and stick well; but I should perfer a hard, sticky varnish for that purpose, made of linseed oil much boiled. The heads might be lined separately, the tin wrapping a little round their edges. The barrel, while the lining is laid on, should have the end hoops slack, so that the staves standing at a little distance from each other may admit the head into its groove. The tinfoil should be plied into the groove. Then, one head being put in, and that end hooped tight, the barrel would be fit to receive the powder,

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and when the other head is put in and the hoops drove up, the powder would be safe from moisture, even if the barrel were kept under water. This tinfoil is but about eighteen pence sterling a pound, and is so extremely thin that, I imagine, a pound of it would line three or four powder barrels.

I am, &c.,

B. FRANKLIN.

CCXXV

B. FRANKLIN'S SERVICES IN THE GENERAL ASSEMBLY

1751.

Aug. 13. Takes his seat in Assembly. Put on a Committee to prepare a Bill, same day.

Aug. 15. Sent up with a Message to Gov^{n} J^{s} H^{n}.

Aug. 17. On a Comm^{ee} to prepare an answer to Gov^{n} Messages.

Aug. 20. Reports on the subject of a Bridge over Skuylkill.

Aug. 22. Reports on the subject of Indian Expenses.

Seven Resolutions N. C. D., of his Drawing, upon that Report.

Appointed on a Committee to draw an address to the Bonrick [mutilated] ing in pursuance of those Resolves.

Aug. 23. Reported the same.

Aug. 24. It was approved—but not put on the Minutes.

Oct. 14. Return'd a Member for Philada.

Sent on a Message to the Gov.

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1751.

Oct. 15. On the Committee of Accts., and Comm^ee of Grievances, and Comm^ee to revise the Minutes.

Oct. 16. On Committee of Correspondence.

1752.

Feb. 3. On a Message to the Governor.

Feb. 7. On Comm^ee to inspect Accts.

Feb. 8. On D^o to consider a Petition of Bakers.

Feb. 17. On D^o for examining the laws relating to fees.

Feb. 24. On D^o for a Bill relating to Dogs.

March 6. On D^o to answer a Message.

March 11. On D^o to see the Great Seal affixed to laws.

On D^o to inquire into the State of our Paper Currency, Trade, Numbers of People, &c.

Aug. 13. On a Message to the Gov^r with the Bill of Fees.

Aug. 20. On a Committee for Conference with the Gov^r on that Bill.

Makes report in writing on the State of Currency, &c.

Aug. 21. Ordered to meet some of the Council, &c.

Aug. 22. On a Message to Governor.

Oct. 14. Return'd a Member for Philada.

Sent on a Message to the Gov^r.

Oct. 17. Appointed on 4 Committees, viz., Grievances, Revisal of Minutes [and?] Accounts, Correspondence, Laws, [mutilated] [?wi]th the Speaker to procure Books and Maps.

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1752.

Oct. 17. . . . Committee to bring in a Bill . . . the Govr on the Navy Bill . . . Committee [pre]pare a Message . . . of the Comee of Grievances

1753.

May 30. On a Committee to consider the Representation to the Proprietaries of 1751. and the answer thereto.

On Do to prepare an Answer to Govr Message.

Sept. 1. On a Committee to consider Govr propos'd Amendmts to a Money Bill.

Sept. 4. On a Committee to Answer the Governrs. Message.

Sept. 7. On Do to report on a Message from the Govr.

175 [mutilated]

Sept. 15. Return'd again for Philada.

Sent on a Message to the Govr.

Sept. 16. Appointed on 4 Committees, viz., Correspondence, Grievances, Accts., Revisal of Minutes.

Sept. 17. On two more Committees, viz., To inspect the laws; and the State of Trade, Currency, &c.

1754.

Feb. 5. Reports thereupon—

Feb. 14. Translates a French Letter to Govr Dinwiddie.

Feb. 15. Reports on the Laws.

Feb. 26. On a Committee for Indian Trade.

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1754.

March 5. On D° for considering a Petition for laying out Townships.
On D° for bringing in a Bill respecting the holding of Courts.

March 6. On D° to consider the Western Bounds.

March 7. Reports on D°.

April 5. On a Committee to bring in a Money Bill.

April 8. Gov^r appoints him a Commissioner for the Albany Treaty.

April 12. Approved by the Assembly.

April 13. On a Committee to inquire into the facts of a Petition.

April 15. On D° to answer a Message from the Gov^r.

April 18. A number of Resolves drawn up by him and agreed to.

Aug. 9. On a Committee to bring in a Money Bill.

1754.

Oct. 14. Return'd for Philada.

Oct. 15. Appointed on Committees of Grievances, and Revisals of Minutes, and Correspondence.

Dec. 31. Representation to the Proprietaries, draw [mutilated] . . . Aug^t 3 . . . put on the Votes . . . 5. [mutilated]

March 17. Takes his seat in . . . house.

March 18. On a Committee to answer . . . and d . . . the Answers.

1755.

March 20. On a Comm^ee to answer an . . . Message.
Lays before the house . . . rec'd from the Gov^r

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1755.

March 22. On a Comm^ee^ to bring in a bill relating to provisions exported.

Requested to consider of establishing a Post for General Braddock.

April 1. Memorial from Josiah Quincy drawn by him.

April 2. Sundry orders of his proposing and drawing to supply N. England with provisions, &c.

April 9. Gives his proposal to the House about the post which was agreed to.

May. 12 Receives the thanks of the House for his great Services in his late journey to the back country, etc.

May 14. On a Committee to prepare a slate of the Bills.

On D^o^ to prepare a Message to the Gov^r^.

May 16. On D^o^ to answer another Message and he draws the answer.

June 13. Communicates to the House the letters of thanks he had received from Gen. Sir Peter Halkes and Col. Dunbar.

June 14. On a Comm^ee^ to answer a Message of the Gov^r^.

June 17. On D^o^ to prepare a Bill.

June 17. On D^o^ to prepare another Bill.

June 24. On D^o^ to answer a Message.

July 28. On D^o^ to D^o^.

July 29. On D^o^ to prepare a Bill for granting 50,000 £ to the King's use.

Sent with it to the Gov^r^.

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1755.

Aug. 5. On D° to answer his Message of Amendments.

Aug. 6. On D° to answer a Message and draws it — a long one.

On D° for a Bill to provide Quarters for the King's Troops.

Aug. 13. On D° to answer a long Message.

Aug. 21. On D° to answer a Message.

Aug. 22. To dispose of money for the defense of the frontiers.

Sept. 15. On D° to prepare a Bill for regulating Inspectors.

Sept. 19. Requested by the House to endeavour to prevail with Col. Dunbar to discharge servants and apprentices.

On a Committee to answer a Message.

Produces to the House a letter to himself from T. Hutchison,[1] which induces the grant of 10,000 £ to Massachusetts.

Sept. 17. Returned for Philada.

Sent with verbal Message to Gov^r.

On 4 Committees: Correspondence, Grievances, Minutes, Laws.

On D° to bring in a Money Bill 60,000 £.

On D° to prepare Bill for supplying our Indians.

On D° to answer a Message.

Nov. 10. On a Co. [mutilated] answer a Message.

[1] Governor of the province of Massachusetts and author of the letters which, some eight years later, were destined to work his ruin.—Ed.

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1755.

Nov. 13. On D° [mutilated] . . . sides two applications to the House from Quakers, and from the Mayor of Philad^a, &c.

Nov. 17. On D° to answer a Message.

Nov. 19. B . . . Leave . . . brings in a Militia Bill

On a Committee to answer a Message.

Nov. 20. On a Committee to amend the Militia Bill.

Nov. 22. On D° to consider Gov^rs message.

Nov. 25. On D° to bring in a Money Bill exempting the Propriey. Estate in consideration of their gift of 5,000 £.

Nov. 29. On D° to answer a Message.

Dec. 3. On D° to answer a Message.

1756.

Feb. I still on the Frontiers building forts.

Feb. 7. On Comm^ee to prepare an Address to Gov^r respecting the enlistment of Servants and draws it.

Feb. 19. Lays before the house letters to him from Gen. Shirley.

On a Comm^ee to answer a Message.

March 3. Brings in a Bill by leave of the House to Regulate soldiers, &c.

March 5. Watch and Lamp Bill brought in.

March 10. On Committee to amend soldiers' Bill.

March 13. Moves the House again on this Bill.

On Comm^ee for that purpose.

March 17. Sent with the Bill to the Gov^r.

Goes to Virginia.

May 12. On Comm^ee to answer a Message.

June 2. On D° to D°.

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1756.

July 22. Then at N. York, charg'd with an address to Gen[l] Shirley, going to England.

Aug. 17. On Comm[ee] to bring in a Bill granting 40,000 £.

Aug. 20. W. M. Denny, Gov[r].

Aug. 21. On Comm[ee] to prepare address to the Governor.

Aug. 30. On D[o] to prepare Answers to Govrs. Speech and Message.

Sept. 1. On a Message to the Governor.

Sept. 3. Draws a long Paper of Remarks on Prop[y]. Instructions.

Sept. 8. Appointed a Commissioner in the Act . . . 60,000 £.

Sept. 13. On a Comm[ee] to prepare reasons in answer . . . to the Bill.

Sept. 16. Draws resolutions relating . . .
On Comm[ee] to prepare a new B . . . D[o] to D[o] . . . up with the 30,000 £ Bi . . .

Oct. 14. Return'd for Philada.

Oct. 18. Order on 3 Committees: Correspondence Grievances, Minutes.

Oct. 21. On D[o] for preparing a Bill to regulate the hire of carriages.

Oct. 22. On D[o] for D[o] ——— Billeting of soldiers.

Oct. 26. On D[o] to confer with Gov[r] about Indians.

Oct. 27. With leave brings in a Bill to regulate forces of this Province.

Oct. 28. As President of the Hospital lays before the House the Accts. thereof.

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1756.

Oct. 28. On a Committee to prepare another Militia Bill.

Oct. 29. On D° to answer Gov^r Message.

Nov. 5. On D° to compare Bills.

On D° to accompany the Governor to treat with Indians [at] Easton.

Nov. 23. On D° to prepare a Message to the Gov^r.

Dec. 2. On D° to examine Journals of House of Commons concerning Elections.

Dec. 3. Reports on the same.

Dec. 8. On a Comm^ee to prepare answer to Gov^r's Message.

Dec. 16. On D° to D° Message concerning Quarters.

Dec. 18. On D° to D°.

Dec. 19. On D° to confer with the Gov^r.

Dec. 22. On D° to answer a Message abt Quarters.

Dec. 24. On D° to prepare a Bill for granting 100,000 £ by Tax.

Jan. 11. On D° to prepare a Bill to relieve Innkeepers.

Jan. 24. On D° to prepare a Bill to strike a sum of Pap. money.

Jan. 28. On D° to wait on the Gov^r with a Message.

Jan. 29. Reports concerning the Treaty at Easton.

Is nominated to go to England.

Feb. 1. On a Committee to prepare a new Bill for granting 100,000 £.

Feb. 3. Accepts the appointment to England.

Appointed Agent.

Feb. 7. On a Comm^ee to answer a Message.

Feb. 12. On D° to D°.

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1756.

March 22. Gov^{r} agrees to pass the Bill for 100,000 £. This was after B. F.'s Conference with him and L^{d} Loudon.

1759.

Feb. 21. Proprietaries' message to the Assembly representing Mr. F. as not a person of Candour, &c.

His heads of Complaint.

Answer thereto by Paris.

. . . 27. Supply . . . B . . . for 100,000 £ Taxing the P'y Estate passe . . . [mutilated]

. . . by Gov . . . eny

. . . Return' . . . Philada . . .

1760.

Oct. 14. Retd for Philada.

Oct. 15. Continu'd Agent with R. ——— Charles.

Oct. 18. Governor Hamilton refuses to certify the Assembly's appointment of Franklin and Charles as Agents, &c.

The Assembly order a Certificate from a Notary and appoint a Committee to consider the Gov^{r}'s refusal, &c. And order the Grant of the Crown to be ——— receiv'd by B. F. and lodg'd in the Bank in several names.

Sept. 19. Bills ordered to be drawn on B. F. for the amount of the Parliamentary Grant.

1762.

May 6. Several letters of different dates received from him.

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1762.

Sept. 21. Dº . . . informing that he had taken his passage, and left the affairs of the Province with Mr. Jackson.

Oct. 15. Return'd again, as in all the preceding years, a member from Philada.

1763.

Jan. 10. In the House again, and on a Committee.

Jan. 12. On another.

Jan. 14. On another and another.

Jan. 18. Engagement of B. F. and R. C. recited.

Jan. 21. On a Committee to prepare a Bill.

Jan. 28. On Dº for another Bill and another.

Feb. 8. On a Committee for another Bill.

Feb. 19. Report on his Accounts and thanks order'd.

March 4. Balance of his Acct. order'd to be paid— £2214 10 0.

March 29. On a Committee for a Bill.

March 31. Thanks given him by the Speaker in . . . form, and answer . . .

Apr . [Mutilated] On a Comm. . . . &c. to ansr. . . . propose . . . Bill.

CCXXVI

TO MRS. GREENE [1]

PHILADELPHIA, 23 January, 1763.

I received with great pleasure my dear friend's favor of December 20th, as it informed me that you

[1] Formerly Miss Catharine Ray, at the date married to Mr. Wm. Greene, who was afterwards Governor of Rhode Island.

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and yours are all well. Mrs. Franklin admits of your apology for dropping the correspondence with her, and allows your reasons to be good; but hopes, when you have more leisure, it may be resumed. She joins with me in congratulating you upon your present happy situation. I thank you for your kind invitation. I purpose a journey into New England in the spring or summer coming. I shall not fail to pay my respects to you and Mr. Greene, when I come your way. Please to make my compliments acceptable to him. I have had a most agreeable time of it in Europe. I have in company with my son been in most parts of England, Scotland, Flanders and Holland; and generally have enjoyed a good share of health. If you had asked the rest of your questions, I could have more easily made this letter longer. Let me have them in your next. I think I am not much altered; at least my esteem and regard for my Katy (if I may still be permitted to call her so) is the same, and I believe will be unalterable, whilst I am, &c., B. FRANKLIN.

P. S.—My best respects to your good brother and sister Ward. My daughter presents her compliments. My son is not yet arrived.

CCXXVII

TO ———

PHILADELPHIA, 9 February, 1763.

SIR:—It is now six years, since, in obedience to the order of the House, I undertook a voyage to England, to take care of their affairs there.

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Fifteen hundred pounds of the publick money was at different times put into my hands, for which I ought to account, and I was instructed to keep accounts of the disbursements I sh [*torn out*] make in the publick service.

But I soon found such accounts were in many instances impracticable. For example, I took my son with me, partly to assist me as a clerk and otherways in the publick service, and partly to improve him by showing him the world. His services were considerable, but so intermixed with private services, as that I could not well attend to [*sic*]. I made journies, partly for the health, and partly that I might, by country visits to persons of influence, have more convenient opportunities of discoursing them on our publick affairs, the expense of which journeys was not easily proportion'd and separated. And being myself honour'd with visits from persons of quality and distinction, I was obliged for the credit of the province to live in a fashion and expense, suitable to the publick character I sustain'd, and much above what I should have done if I had been consider'd merely as a private person: and this difference of expense was not easy to distinguish, and charge in my accounts. The long sickness and frequent relapses I had the first and part of the second winter, occasioned by a change of climate, were many ways expensive to me, of which I could keep no acct. if indeed I ought to have charg'd the province with such expenses. The disbursement of the following sums I have however accounts and receipts to avouch, viz. [*The rest wanting.*]

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CCXXVIII

TO WILLIAM STRAHAN

PHILADELPHIA, 23 February, 1763.

DEAR STRANEY:—I have only time to write one line by this conveyance, just to congratulate you on the glorious peace you have made, the most advantageous for the British nation, in my opinion, of any your annals have recorded. The places you have left or restor'd to the French, I look upon to be so much in our power in case of a future war, as to be so many hostages or pledges of their good behaviour.

Love to Mrs. Strahan and your children. Billy joins in every affectionate sentiment, with, dear friend, Yours affectionately,

B. FRANKLIN.

CCXXIX

CONGELATION OF QUICKSILVER—COLD PRODUCED BY EVAPORATION [1]

PERTH AMBOY, 26 February, 1763.

The most remarkable discovery that has been made within these three years is, that quicksilver is in reality a melted metal, with this character only, that of all others it requires the least heat to melt it. The Academy of Sciences at Petersburg have found that by dipping a mercurial thermometer into repeated

[1] This is a fragment of a letter in the handwriting of Franklin, but it is not known to whom it was written.

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cooling mixtures, and so taking from the mercury the heat that was in it, they have brought it down some hundred degrees (the exact number I cannot remember) below the freezing point, when the mercury became solid and would sink no longer, and then the glass being broke it came out in the form of a silver bullet adhering to a wire, which was the slender part that had been in the tube. Upon trial it was found malleable, and was hammered out to the bigness of a half-crown, but soon after, on receiving a small degree of warmth, it returned gradually to its fluid state again. This experiment was repeated by several members of that Academy two winters successively, and an authentic account of it transmitted to our Royal Society.

I suppose you have seen in the second volume of the new *Philosophical Essays* of the Edinburgh Society an account of some experiments to produce cold by evaporation, made by Dr. Cullen, who mentions the like having been before made at Petersburg. I think it is but lately that our European philosophers have known or acknowledged any thing of such a power in nature. But I find it has been long known in the east. Bernier, in the account of his travels in India, written above a hundred years since, mentions the custom of travellers carrying their water in flasks covered with wet wrappers, and hung to the pommels of their saddles, so as that the wind might act upon them, and so cool the water. I have also seen a kind of jar for cooling water, made of potter's earth glazed, and so porous that the water gradually oozed through to the surface, supplying water just sufficient

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for a constant evaporation. I tried it, and found the water within much cooler in a few hours. This jar was brought from Egypt.

CCXXX

TO MISS MARY STEVENSON

PHILADELPHIA, 25 March, 1763.

MY DEAR POLLY:—Your pleasing favor of November 11th is now before me. It found me, as you supposed it would, happy with my American friends and family about me; and it made me more happy in showing me, that I am not yet forgotten by the dear friends I left in England. And, indeed, why should I fear they will ever forget me, when I feel so strongly that I shall ever remember them?

I sympathize with you sincerely in your grief at the separation from your old friend, Miss Pitt. The reflection that she is going to be more happy, when she leaves you, might comfort you, if the case were likely to be so circumstanced; but, when the country and company she has been educated in, and those she is removing to, are compared, one cannot possibly expect it. I sympathize no less with you in your joys. But it is not merely on your account that I rejoice at the recovery of your dear Dolly's [1] health. I love that dear good girl myself, and I love her other friends. I am, therefore, made happy by what must contribute so much to the happiness of them all.

[1] Miss Dorothea Blount.

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Remember me to her, and to every one of that worthy and amiable family, most affectionately.

Remember me in the same manner to your and my good Dr. and Mrs. Hawkesworth. You have lately, you tell me, had the pleasure of spending three days with them at Mrs. Stanley's. It was a sweet society. I, too, once partook of that same pleasure, and can therefore feel what you must have felt. Remember me also to Mr. and Mrs. Stanley, and to Miss Arlond.

Of all the enviable things England has, I envy it most its people. Why should that petty Island, which, compared to America, is but a stepping-stone in a brook, scarce enough of it above water to keep one's shoes dry; why, I say, should that little Island enjoy, in almost every neighbourhood, more sensible, virtuous, and elegant minds, than we can collect in ranging a hundred leagues of our vast forests? But it is said the Arts delight to travel westward. You have effectually defended us in this glorious war, and in time you will improve us. After the first cares for the necessaries of life are over, we shall come to think of the embellishments. Already, some of our young geniuses begin to lisp attempts at painting, poetry, and music. We have a young painter now studying at Rome. Some specimens of our poetry I send you, which, if Dr. Hawkesworth's fine taste cannot approve, his good heart will at least excuse. The manuscript piece is by a young friend of mine, and was occasioned by the loss of one of his friends, who lately made a voyage to Antigua to settle some affairs, previous to an intended marriage with an amiable young lady here, but unfortunately died

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there. I send it to you, because the author is a great admirer of Mr. Stanley's musical compositions, and has adapted this piece to an air in the sixth *Concerto* of that gentleman, the sweetly solemn movement of which he is quite in raptures with. He has attempted to compose a *recitativo* for it, but, not being able to satisfy himself in the bass, wishes I could get it supplied. If Mr. Stanley would condescend to do that for him, he would esteem it as one of the highest honours, and it would make him excessively happy. You will say that a *recitativo* can be but a poor specimen of our music. It is the best and all I have at present, but you may see better hereafter.

I hope Mr. Ralph's affairs are mended since you wrote. I know he had some expectations, when I came away, from a hand that would help him. He has merit, and one would think ought not to be so unfortunate.

I do not wonder at the behaviour you mention of Dr. S—— towards me, for I have long since known him thoroughly. I made that man my enemy by doing him too much kindness. It is the honestest way of acquiring an enemy. And, since it is convenient to have at least one enemy, who, by his readiness to revile one on all occasions, may make one careful of one's conduct, I shall keep him an enemy for that purpose; and shall observe your good mother's advice, never again to receive him as a friend. She once admired the benevolent spirit breathed in his sermons. She will now see the justness of the lines your laureate Whitehead addressed to his poets, and which I now address to her:

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"Full many a peevish, envious, slanderous elf
Is, in his works, benevolence itself.
For all mankind, unknown, his bosom heaves;
He only injures those with whom he lives.
Read, then, the man;—does *truth* his actions guide,
Exempt from *petulance*, exempt from *pride*?
To social duties does his heart attend,
As son, as father, husband, brother, *friend*?
Do those, who know him, love him? If they do,
You've *my* permission, you may love him too."

Nothing can please me more, than to see your philosophical improvements, when you have leisure to communicate them to me; I still owe you a long letter on that subject, which I shall pay. I am vexed with Mr. James, that he has been so dilatory in Mr. Madison's *Armonica*. I was unlucky in both the workmen that I permitted to undertake making those instruments. The first was fanciful, and never could work to the purpose, because he was ever conceiving some new improvement, that answered no end. The other I doubt is absolutely idle. I have recommended a number to him from hence, but must stop my hand.

Adieu, my dear Polly, and believe me, as ever, with the sincerest esteem and regard, your truly affectionate friend and humble servant,

B. Franklin.

P. S.—My love to Mrs. Tickell and Mrs. Rooke, and to Pitty, when you write to her. Mrs. Franklin and Sally desire to be affectionately remembered to you. I find the printed poetry I intended to enclose will be too bulky to send. I shall send it by a ship that goes shortly from hence.

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CCXXXI

TO JONATHAN WILLIAMS [1]

PHILADELPHIA, 13 April, 1763.

LOVING KINSMAN: — You may remember that about ten years since, when I was at Boston, you and my brother sent directions here to attach on Grant's right to some land here by virtue of a mortgage given him by one Pitt. Nothing effectual could be done in it at that time, their being a prior mortgage undischarged. That prior mortgage is now near expiring, and Grant's will take place. Pitt's widow is desirous of being enabled to sell the place, which cannot be done without paying off Grant's mortgage. Therefore, if your old demand against Grant still subsists, you may empower me in any manner you think proper to recover it.

Is Grant living? Or, if dead, are there any of his representatives among you? Inquire. Because here is a person desirous of purchasing, who perhaps may inquire them out and get a discharge from them before your claim is brought forward, unless the attachment formerly made in your behalf is still good, which I am inclined to think may be.

I am going in a few days to Virginia, but expect to be back in three or four weeks. However, send what you have to say on this subject to my son, at

[1] Johathan Williams married Grace Harris, a niece of Dr. Franklin's, and was the father of Jonathan Williams, who acted as a commercial agent for the United States in France during a large part of the Revolution, and whose name often occurs in the course of this correspondence. The son, after filling important stations as a colonel of engineers and superintendent of the Military Academy at West Point, died May 20, 1815.

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Burlington, who was formerly empowered by you, and he will take the steps necessary, if I should not be returned, I am your loving uncle,

B. FRANKLIN.

CCXXXII

TO WILLIAM STRAHAN

PHILADELPHIA, June 2, 1763.

DEAR FRIEND:—I have just received your favour of February 28th, being but lately returned home from Virginia. Dr. Kelley, in his letter, appears the same sensible, worthy, friendly man I ever found him, and Smith, as usual, just the reverse. I have done with him; for I believe nobody here will prevail with me to give him another meeting. I communicated your postscript to B. Mecom, and received the enclosed from him. I begin to fear things are going wrong with him. I shall be at New York in a few days, and will endeavour to secure you as far as it may be in his power, and will write you from thence. My love to good Mrs. Strahan and to your children. I hope to live to see George a bishop. Sally is now with her brother in the Jerseys. Mrs. Franklin joins with me in best wishes, &c. I am, dear Sir,

Your most obedient and most hum. servt.,

B. FRANKLIN.

I fear my letter to you per Captain Friend never came to hand, as I hear he is taken. It was the ship I came over in, the *Carolina*. I wrote pretty fully to you and Mr. Stephenson, but kept no copies.

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CCXXXIII

TO MISS MARY STEVENSON

WOODBRIDGE, NEW JERSEY, 10 June, 1763.

I wrote to my dear friend's good mamma to-day, and said I should hardly have time to write to you; but finding a spare half hour I will indulge myself in the pleasure of spending it with you. I have just received your most agreeable epistle of March 11th. The ease, the smoothness, the purity of diction, and delicacy of sentiment that always appear in your letters never fail to delight me; but the tender filial regard you constantly express for your old friend is particularly engaging. Continue, then, to make him happy from time to time with that sweet intercourse, and take in return all he can give you, his sincerest wishes for you of every kind of felicity.

I hope that by the time this reaches you an account will arrive of your dear Pitty's safe landing in America among her friends. Your Dolly, too, I hope, has perfectly recovered her health, and then nothing will remain to give you uneasiness or anxiety. Heaven bless you, and believe me ever, my dear child, your affectionate friend and humble servant,

B. FRANKLIN.

CCXXXIV

TO WILLIAM STRAHAN

WOODBRIDGE, NEW JERSEY, 10 June, 1763.

DEAR STRANEY:—I am here in my way to New England, where I expect to be till towards the end of

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summer. I have writ to you lately, and have nothing to add. 'T is against my conscience to put you to the charge of a shilling for a letter that has nothing in it to any purpose; but as I have wrote to some of your acquaintance by this opportunity, I was afraid you would not forgive me if I did not write also to you. This is what people get by not being always as good-natured as they should be. I am glad, however that you have this fault; for a man without faults is a hateful creature. He puts all his friends out of countenance; but I love you exceedingly. I am glad to hear that friend was dismissed and got safe with his ship to England, for I think I wrote you a long letter by him, and fear'd it was lost; tho' I have forgot what was in it, and perhaps it was not very material; but now you have it. Tell me whether George is to be a Church or Presbyterian parson. I know you are a Presbyterian yourself; but then I think you have more sense than to stick him into a priesthood that admits of no promotion. If he was a dull lad it might not be amiss, but George has parts, and ought to aim at a mitre. God bless you, and farewell. If I write much more I must use a cover, which will double the postage. So I prudently cut short (thank me for it) with, Dear Straney,

Your affectionate friend and hum. servant,

B. FRANKLIN.

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CCXXXV

TO MRS DEBORAH FRANKLIN

NEW YORK, 16 June, 1763.

MY DEAR CHILD:—We left Woodbridge on Tuesday morning and went to Elizabethtown, where I found our children returned from the Falls, and very well. The Corporation were to have a dinner that day at the Point for their entertainment, and prevailed on us to stay. There were all the principal people, and a great many ladies. After dinner we set out, and got here before dark. We waited on the governor and on General Amherst yesterday, dined with Lord Stirling, went in the evening to my old friend Mr. Kennedy's funeral, and are to dine with the general to-day. Mr. Hughes and daughter are well, and Betsy Holt. I have not yet seen B. Mecom, but shall to-day. I am very well.

I purpose to take Sally, at all events, and write for her to-day to be ready to go in the packet that sails next Friday week. If there is no other suitable company, Mr. Parker will go with her and take care of her. I am glad you sent some wax candles with the things to Boston. I am now so used to them that I cannot do well without them. You spent your Sunday very well, but I think you should go oftener to church. I approve of your opening all my English letters, as it must give you pleasure to see that people who knew me there so long and so intimately retain so sincere regard for me.

My love to Mr. Rhoads when you see him, and desire he would send me an invoice of such locks,

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hinges, and the like, as cannot be had at Philadelphia, and will be necessary for my house, that I may send for them. Let me know from time to time how it goes on. Mr. Foxcroft and Mr. Parker join in compliments to you and cousin Lizzy. Mr. F.—— prays his mamma to forgive him, and he will be a better boy. I am, my dear Debby, your affectionate husband,

B. FRANKLIN.

END OF VOLUME III.

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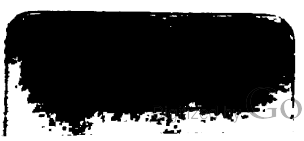
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